

2015

Consumers in an online brand community: uses and gratifications, social capital, and brand loyalty

Jihyeong Son
Iowa State University

Follow this and additional works at: <https://lib.dr.iastate.edu/etd>



Part of the [Advertising and Promotion Management Commons](#), and the [Marketing Commons](#)

Recommended Citation

Son, Jihyeong, "Consumers in an online brand community: uses and gratifications, social capital, and brand loyalty" (2015). *Graduate Theses and Dissertations*. 14440.
<https://lib.dr.iastate.edu/etd/14440>

This Dissertation is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

**Consumers in an online brand community:
Uses and gratifications, social capital, and brand loyalty**

by

Jihyeong Son

A dissertation submitted to the graduate faculty

In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Apparel Merchandising and Design

Program of Study Committee:

Mary Lynn Damhorst, Major Professor

Linda Niehm

Young-A Lee

Frederick O. Lorenz

Sela Sar

Iowa State University

Ames, Iowa

2015

Copyright © Jihyeong Son, 2015. All rights reserved.

DEDICATION

I dedicate this dissertation to my parent.

나의 부모님께 이 논문을 바칩니다.

TABLE of CONTENTS

LIST OF FIGURES	vi
LIST OF TABLE	vii
ACKNOWLEDGEMENTS	ix
ABSTRACT	x
 CHAPTER 1. INTRODUCTION	 1
Purpose of the Study	4
Objectives of the Study	6
Background: Research Setting.....	7
Operational Definitions of Terms	9
 CHAPTER 2. LITERATURE REVIEW	 11
Theoretical Framework	11
Uses and Gratification Theory	11
Social Capital and Network Theory.....	14
Social Capital Accumulations.....	17
Outcomes of Social Capital Accumulation.....	23
Needs to Use Online Brand Community and Social Capital Accumulations and Outcomes	28
Brand Related Attitude and Behaviors	30
Brand Loyalty	30
Proposed Model	32
 CHAPTER 3. METHOD	 34
Sample Description and Data Collection.....	34
Approval of the Use of Human Subjects	35
Pretest.....	36
Instruments.....	36
Needs to Use an Online Brand Community.....	36
Social Capital Accumulations.....	38
Outcomes of Social Capital Accumulations	41
Brand Loyalty	42
Demographic/Background Questionnaire.....	43
Data Analysis	44

Preliminary Analysis.....	44
Analysis of Causal Models	45
CHAPTER 4. RESULTS	47
Sample.....	47
Demographic Description	47
Apparel Product Purchases	48
Internet and Online Brand Community Usage.....	49
Preliminary Data Analysis: Factor Structure and Reliability Assessment.....	52
Needs to Use an Online Brand Community.....	52
Social Capital Accumulation	56
Knowledge Sharing.....	60
Community Commitment	61
Brand Loyalty	61
Hypothesized Model	64
Correlations between the Variables	64
The Measurement Model	66
The Latent Model.....	73
Tests of Hypotheses 3 to 11	76
The Fully Recursive Model	80
Alternate Model	82
Second Order Factor Analysis Model of Social Capital	82
The Measurement Model	86
The Latent Model with the Second-Order Factor	93
Results of Alternate Model Testing	96
CHAPTER 5. DISCUSSION and CONCLUSIONS	100
Summary and Discussion.....	100
Descriptive Analysis of Sample.....	101
Dimensionality of Variables	102
Conclusions.....	107
Implications.....	109
Limitations	112
Future Research	113

APPENDIX A.....	117
APPENDIX B.....	127
APPENDIX C.....	128
REFERENCES	170

LIST OF FIGURES

Figure 1.1. Theoretical Model of Relationships among Needs to Use an Online Brand Community, Social Capital Accumulations and Outcomes, and Brand Related Attitude and Behaviors	33
Figure 4.1. The Proposed Model Showing the Hypothesized Relationships between the Variables	74
Figure 4.2. The Second-order Factor Analysis of Social Capital Measure	85
Figure 4.3. The Alternate Model Showing the Hypothesized Relationships between the Variable	94

LIST OF TABLE

Table 4.1. Descriptive Statistics of Survey Sample Characteristics	50
Table 4.2. Confirmatory Factor Analysis and Reliability Testing of Dimensions of Needs to Use an Online Brand Community	54
Table 4.3. Correlations between Five Dimensions of Needs to Use an Online Brand Community.	55
Table 4.4. Confirmatory Factor Analysis and Reliability Testing for Social Capital Accumulation Dimensions	58
Table 4.5. Correlations between Three Dimensions of Social Capital Accumulations.....	60
Table 4.6. Results of Confirmatory Factor Analysis of Knowledge Sharing ($n = 499$)	60
Table 4.7. Results of Confirmatory Factor Analysis of community commitment ($n = 499$)	61
Table 4.8. Fit Indices for Brand Loyalty.....	62
Table 4.9. Results of Confirmatory Factor Analysis of Brand Loyalty ($n = 499$)	63
Table 4.10. Correlations between the Variables	65
Table 4.11. Results of Measurement Model with 11 Latent Variables and 63 Indicators.....	68
Table 4.12. Standardized Path Coefficients and Fit Statistics for the Proposed Model	75
Table 4.13. Comparison between Standardized Path Coefficients of the Proposed Model and Standardized Path Coefficients of the Fully Recursive Model	81
Table 4.14. First-order Standardized Factor Loadings of Social Capital Scale Items	83
Table 4.15. Results of Measurement Model with 9 Latent Variables and 55 Indicators.....	88

Table 4.16. Correlations between the Variable.....	92
Table 4.17. Standardized Path Coefficients and Fit Statistics for the Alternate Model	95
Table 4.18. Comparison between Standardized Path Coefficients of the Proposed Model and Standardized Path Coefficients of the Alternate Model	99

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my advisor, Dr. Damhorst, for her endless support and encouragement to pursue my doctorate and dissertation.

I would like to thank my committee members Dr. Niehm, Dr. Lee, Dr. Sar, and Dr. Lorenz for their insightful and valuable suggestions and comments to improve my dissertation.

I would like also thank the College of Human Science at Iowa State University for their financial support through scholarships and assistantships during my doctoral program.

I would like to extend my sincere thank you to my family, friends and colleagues for always encouraging and believing in me.

ABSTRACT

With the popularity of online brand communities, consumers interact and build social relations with other consumers to share information about products and services. The purposes of this study were to investigate: (1) what needs bring consumers to participate in and what social resources are generated in an online brand community, (2) the process of how needs to use an online brand community are gratified through achieving social resources in an online brand community, and (3) what outcomes of social interaction in an online brand community influence loyalty toward brands which communities endorsed. A conceptual model was developed combining two theories -- uses and gratification theory and social capital and network theory -- to test causal linkages among consumer needs to participate in an online brand community, social capital accumulations, knowledge sharing, community commitment, and brand loyalty.

Data were collected using a web-based survey through Amazon Mechanical Turk. A total of 499 respondents were U.S. consumers who had been members or visitors of an apparel, shoes, or accessory online brand community. Confirmatory factor analysis identified five needs to participate in an online brand community -- socialization, entertainment seeking, self-status seeking, information seeking, and convenience seeking -- and three social capital accumulations in the online brand community context -- structural, cognitive, and relational capital.

Structural equation modeling indicated that consumers' needs to use an online brand community did not directly influence the outputs of social capital accumulations such as knowledge sharing and community commitment. However, needs influenced social capital accumulation, and these accumulations influenced social capital outcomes (i.e., knowledge sharing, community commitment). Consumers' socialization need in an online brand community positively influenced all dimensions of social capital (structural, cognitive and relational capital).

Self-status seeking positively influenced structural capital formation. Information seeking positively influenced cognitive and relational capital. Convenience seeking positively influenced relational capital. Structural capital positively influenced knowledge sharing, and cognitive capital positively influenced community commitment. Relational capital positively influenced both social capital outcomes of knowledge sharing and community commitment. These findings provide an understanding that consumers' needs to use online brand community are gratified by interacting with other consumers through social resources generated within a network of an online brand community. In addition, to obtain more social capital, consumers engaged in social interaction (i.e., knowledge sharing) and felt cohesion toward community.

In addition, relational capital and community commitment positively influenced brand loyalty. Thus, this study provides an understanding that emotions and feelings toward relationships within an online brand community are important factors related to attitudinal and behavioral loyalty toward the brand endorsed within the community.

The findings have managerial implications for apparel brand marketers and retailers in operating online brand communities and in understanding what needs consumers have in regard to their participation in an online brand community. Finally, the findings show how interaction and participation in an online brand community satisfies and reinforces consumers' brand loyalty.

CHAPTER 1. INTRODUCTION

Social networking, which connects individuals and groups through online networks (Boyd & Ellison, 2008), has created new ways to communicate and share assets such as knowledge, information, and experience. Consumers use this new media for social interaction with relatives, friends, and others who use the same brands as themselves (Kozinets, 2002). A brand community is organized to increase communication among consumers of a particular brand and product line (McAlexander, Schouten & Koenig, 2002; Muniz & O'Guinn, 2001). Consequently, brand communities have moved online and are extended to online discussions of consumption activities related to brand meanings. Brand communities are activated through online social networking using email service, chat rooms, discussion boards, and instant messaging among consumers about brands (Jang, Olfman, Ko, Koh, & Kim, 2008). An online brand community overcomes time and space constraints via the Internet (Andersen, 2005). Thus, an online brand community has been defined as: "a specialized, non-geographically bound community based on a structured set of social relations among admirers of a brand" (Muniz & O'Quinn, 2001, p. 412).

Online brand communities have three main characteristics that are typical of communities: (a) shared consciousness, (b) common rituals and traditions, and (c) a sense of moral responsibility for the group (Muniz & O'Quinn, 2001). Consequently, through social interaction with others in an online brand community, consumers obtain intangible resources which may provide them various types of social capital. These resources connect to individuals' skills, achievements, reputation, and role status within an online brand community. Social capital is acquired as a community asset; it is socially generated, maintained, and exchanged by consumers in the community (Burt 1997; Putnam, 1993; Putnam, 1995a; Wasko & Faraj, 2000)

but also consumers use these social resources for their own benefit. For examples, consumers use social capital outcomes, such as shared brand knowledge, for generating interaction in an online brand community and for informing their brand purchases.

Discussions are held among members related to the consumption of brand products to help consumers identify with the brand (McAlexander, Schouten, & Koenig, 2002). Therefore, social interactions among members in a brand community impact relationships with and attitudes toward a specific brand (Füller, 2008). For example, brand communities influence members' perceptions and purchase behaviors (Muniz & Schau, 2005) and increase their knowledge of the brand (Brown, Kozinets, & Sherry, 2003). Marketers engage and collaborate with highly loyal customers to develop products in brand communities (Franke & Shah, 2003), thus creating value for firms and their consumers (Kim, Choi, Qualls, & Han, 2008).

Consumers have built online brand communities that react to members' needs by sharing information about pre-purchases, purchases, and follow-ups regarding products and services (Jan, Olfman, Ko, Koh, & Kim, 2008). Social interactions resulting from shared information influence not only members' brand loyalty (Sukoco & Wu, 2010; Sung, Kim, Kwon, & Moon, 2010) but also create word-of-mouth advertising through knowledge passed outside the community (Brown, Broderick, & Lee, 2007). Consequently, consumers' specific brand knowledge and endorsements are shared among online brand community members who, in turn, influence other potential consumers who may also pass this knowledge to additional customers outside brand communities.

To share same interests, consumers join online communities, such as those endorsed to specific brands, thus sharing their opinions and purchase experiences with worldwide audiences. Marketing-related information may also be shared on these communities, including brand

favorability, brand preferences, and reviews to advertisements and shipping policies. This enables individual consumers to disperse their knowledge and information to other members within a community (Ryu, Ho, & Han, 2003). Hence, in online brand communities, members' subjective knowledge of given products or brands (Keller, 2003) is transferred from one member to another. Interpretations held by members, who include knowledge sharers, may be modified by synergistic exchanges within the community. Establishing brand knowledge (i.e., brand awareness, brand image) has been a key goal of brand management and marketers, especially in the apparel industry. Brand marketers spend considerable resources fostering online brand communities; the supply of knowledge online determines members' willingness to share knowledge with other community members.

Based on the popularity of social network websites such as Facebook, YouTube and Twitter that provide social networking tools, individuals create profiles and networks that connect to other users (Lenhart & Madden, 2007). Social network websites provide web based services that enable users to build a public or semi-public profile, identify other users with who they share a connection and navigate connections made by others within a network (Boyd & Ellison, 2007). Consequently, social network websites provide tools to operate online brand communities where individual consumers freely exchange information and experiences with others in the network, sharing a variety of interests in and concerns about products and brands.

The growth of social network websites has enabled companies to establish online brand communities. These sites provide distinctive marketing communication tools for brands, easily accessible by devoted consumers (Anderson, 2005; Jang, Olfman, Ko, Koh, & Kim, 2008; Sung, Kim, Kwon, & Moon, 2010). Retailers operate brand communities within social network websites to provide a place for consumers to communicate with each other and to interact as

members of the community (Cha, Mislove, & Gummadi, 2009). Through the social interaction characteristic of online brand communities, brands achieve relationship marketing with like-minded consumers who identify with the online brand community (McAlexander, Shouten, & Koenig, 2002). Interactions within an online brand community foster relations and attitudes toward brands by influencing members' perceptions and actions (Muniz & Schau, 2005) and increasing members' knowledge (Brown, Kozenets, & Sherry, 2003), while offering brands opportunities to engage with highly loyal consumers (Franke & Shah, 2003) through discussions of consumption activities and brand meanings. Thus, apparel brands exploit social network sites to communicate and provide online brand communities to their customers. Within social network sites, retailers use various communication tools such as instant messages, blogs, discussion boards, links, photos and video files to share information with consumers—a relatively cost effective method for building a brand-dedicated community.

Purpose of the Study

Despite the increasing popularity of online brand communities utilized by apparel retailers, important gaps still remain in online brand community research regarding the ability to explain how the process affects the online brand community as well as marketing and brand consumption by consumers. There is currently a lack of theory-based research on the basic mechanisms that explain consumers' needs fulfilled by use of online brand communities and gratifications achieved by sharing resources and interacting with other consumers.

Recent studies have explored motivations (i.e., knowledge seeking, social status) among those who participate in online brand communities (Sukoco & Wu, 2010; Sung, Kim Kwon, & Moon, 2010). However, the research has been limited to understanding how motivation leads to community commitment rather than how this commitment influences brand loyalty behaviors.

Kim, Choi, Qualls, and Han (2008) explored the relationship between online brand community commitment and brand commitment reflected in purchase intention, word-of-mouth activity, and co-production; however, the social impact (consumer-to-consumer communication) of community commitment was not addressed. Wu and Sukoco (2010) examined motivation to influence knowledge sharing and behavioral intentions, such as intention to participate in and recommend the online brand community and loyalty behaviors toward the brand; however, Wu and Sukoco did not address how social motivation influences knowledge sharing in online brand communities or explain the relationship between brand community commitment and brand loyalty in online brand community members.

Therefore, critical questions still remain in understanding the casual linkages among consumer need to participate in an online brand community, social interaction (i.e., knowledge sharing), social cohesion within the community, and brand loyalty. There is a need to understand these relationships to explain how consumers' needs are fulfilled by use of online brand communities, gratifications are achieved by sharing resources and interacting with other consumers, and effectiveness of online brand communities for marketers can be enhanced.

This study will attempt to fulfill these gaps by answering the following research questions:

1. What needs do consumers have that lead them to participate in an online brand community?
2. What are social resources generated in an online brand community?
3. Do these social resources influence knowledge sharing in and commitment to an online brand community?

4. Are needs gratified through social resources that enable interaction with other consumers (i.e., knowledge sharing) and commitment to a community?
5. Do outcomes of online brand community membership influence brand related attitudes and behavior such as loyalty toward the brand?

Answers to these questions may enable more effective use of online brand communities to enhance corporate performance.

The theoretical framework of the study incorporated (a) uses and gratification theory and (b) social capital and network theory. A combination of these two theories was the foundation on which the researcher developed a conceptual model. The model tests the two theories to explain the process in which needs to use an online brand community are fulfilled and gratified by outcomes of social capital (i.e., knowledge sharing, community commitment) and the combined influence of these factors on consumers' loyalty behaviors toward a brand.

Objectives of the Study

The overall objectives of the study are to increase understanding of the process consumers use to interact with other consumers in a brand community and their intention to be involved in a community and brand. More specifically, the objectives were to:

1. Apply uses and gratification theory to identify the need to use an online brand community;
2. Apply social capital and network theory to conceptualize social resources generated in an online brand community;
3. Apply social capital and network theory to identify facets of the three dimensions of social capital;
4. Apply social capital and network theory to identify outcomes of social capital accumulations;

5. Identify the dimensions of loyalty toward a brand;
6. Propose a model that integrates the key variables identified; and
7. Empirically examine the proposed model using a sample of online brand community users.

Background: Research Setting

Online brand communities have been categorized according to who owns and manages the communities, either (1) consumer generated or (2) brand generated communities (Henri & Pudelko, 2003; Jang, Olfman, Ko, Koh, & Kim, 2008; Kozinets, 1999; Leimeister, Sidiras, & Krcmar, 2006; Porter, 2004; Sung, Kim, Kwon, & Moon, 2010). In general, consumer generated online brand communities are voluntarily initiated and operated by enthusiastic consumers to exchange information and experience about brands and products. These marketer-free communities are consumer rather than business driven, providing ideal organizations to examine how affiliation arises out of individual interest (Fine & Holyfield, 1996).

In contrast, business generated communities are purposefully initiated and controlled by brand marketers to build relationships with consumers and to shape consumer response about their brands and products from a marketing point of view (MacWilliam, 2000; Sung, Kim, Kwon, & Moon, 2010). Indeed, these business-generated brand communities have the authority to enforce explicit social control over members' activities within the community but are not ideal for exploring members' free-will to join the community (Fine & Holyfield, 1996). For example, consumers participating in consumer-generated brand communities do so with personal or social motivation, rather than participating in business-generated communities offering incentives such as coupons, cyber money, or free samples (Sung et al., 2010). In addition, knowledge sharing in online brand communities is influenced by trust, perceived information control, truthfulness in

interactions, and fairness among members (Chai & Kim, 2010). Consumers may perceive retail-operated online brand communities as advertising intended to have a marketing effect on them--generating less trust for shared information and curbing consumer knowledge sharing activities. Consumers have been shown to be relatively more willing to share personal information (i.e., real name, contact information) within a consumer-generated brand community (Sung et al., 2010). However, in consumer-generated brand communities, consumers are likely to control messages, and the success of a brand community depends on control of members through regulations or policies for the community (MacWilliam, 2000). Although overly controlling messages and interactions in online brand communities may make members lose interest in participating, the managers' leadership and development of topics of discussion or dialogue triggers consumers' social interaction and knowledge sharing activities in both of consumer- and business-generated online brand communities. Therefore, to explore (1) gratifications from and needs to use online brand communities, (2) social capital generation among members in online brand communities, and (3) online brand communities' influences on brand related attitude and behaviors, this study will include a members and visitors of both consumer-generated and business-generated communities.

In the proposed study social media will be used as both a research field and data gathering instrument. First, online observations of online brand communities (i.e., www.niketalk.com, www.effortlessanthropologie.blogspot.com, <http://www.fanpop.com/spots/converse>) using the netnography method (Kozinets, 2002) will be conducted to identify member activities observed. Based on these findings, a rationale for purifying and revising the scales adopted from previous research to measure variables will be devised. An initial pool of scale items will then be developed. Second, through Amazon's

Mechanical Turk, an open online marketplace for human intelligence tasks, participants will be recruited who currently participate in an apparel, shoe, and/or accessory online brand community. Based on quantitative data collected through a survey of online brand community members, a main study using samples of online members will be conducted to purify and validate the scales. Finally, the conceptual model based on uses and gratification and social capital theories will be examined to test the relationships among motivations, perceived social capital and its outcomes, and brand related behaviors.

Operational Definitions of Terms

Online brand community: “A specialized, non-geographically bound community based on a structured set of social relations among admirers of a brand” (Muniz & O’Quinn, 2001, p. 412).

Social interaction: Connects individuals and groups in online networks (Boyd & Ellison, 2008) and involves sharing of assets such as knowledge, information, and experience in an online brand community context.

Social network websites: Social network websites provide web based services that enable users to build a public or semi-public profile, identify other users with who they share a connection and and navigate connections made by others within a network (Boyd & Ellison, 2007; Lenhart & Madden, 2007).

Uses and gratifications: Individuals’ social and psychological needs influence choice and engagement in media and mediated communications to gratify needs (Lin, 1999; Rubin, 1994).

Social capital: An individual’s own assets obtained and used for personal benefit but acquired through a community; social capital is socially generated, maintained, and exchanged by individuals in the community (Burt 1997; Putnam, 1993; Putnam, 1995a; Wasko & Faraj, 2000).

Knowledge sharing: The behavior of an individual exchanging his or her obtained knowledge and information with other members within a community (Ryu, Ho, & Han, 2003).

Community Commitment: In an online community context, commitment is referred to as “each member’s attitude toward the community” (Jang, Olfman, Ko, Koh, & Kim, 2008, p. 62).

Consequently, online community commitment is an emotional attachment resulting in a positive attitude among members toward the community. Community commitment includes not only emotional attachment toward but also behavioral outcomes (i.e., participation in and recommendation of the community), as commitment results in the formation of consumer loyalty and behavioral intentions (Morgan & Hunt, 1994).

Brand Loyalty: Has behavioral and attitudinal components (Aaker, 1991, 1999; Harris & Goode, 2004; Oliver, 1997). Commitment to a brand often develops into emotional attachment to a brand (Aaker, 1991), repurchasing of a brand product or service (Oliver, 1999), and recommendation of the brand to others.

CHAPTER 2. LITERATURE REVIEW

Theoretical Framework

In the present study, uses and gratification, social network and social capital theories served as theoretical frameworks to explain why consumers interact with others in an online brand community. Uses and gratification theory provides a framework to explain why consumers use unique social structures (such as social media) to interact with other consumers, and how their needs relate to online brand community use and socially embedded consumption (i.e., exchanging information and experiences about pre-purchases, purchases, and loyalty toward a specific brand among consumers). Social network and social capital provide a framework for understanding socially embedded consumption resulting from connections with online brand community users.

Uses and Gratification Theory

Uses and gratification theory originated from needs and motivation theory. The latter proposed that individuals engage in goal directed behavior to satisfy their hierarchy of needs (Maslow, 1970). Katz, Blumer, & Gurevitch (1974) adapted principles of Maslow's theory to explain how individuals selectively use mass communication vehicles to gratify needs. They, as well as other researchers (Lin, 1999; Rubin, 1994), employed uses and gratification theory to understand individuals' social and psychological needs that influence choice and engagement in certain media and mediated communications to gratify psychological needs. The theory has been applied to various media such as television (McQuail, Blumler, & Brown, 1972; Rubin, 1981), radio (Mendelsohn, 1964), newspapers (Elliott & Rosenberg, 1987), and video games (Sherry, Lucas, Rechtsteiner, Brooks, & Wilson, 2001).

Needs to use media have been categorized according to social and psychological goals for media uses. McQuail (1987) developed a typology of common needs with four categories: seeking information, identity, integration and social interaction, and entertainment. In a recent literature review West & Turner (2010) categorized needs gratified through media into five types: cognitive (i.e., searching for information), affective (i.e., entertaining), personally integrative (i.e., enhancing self-confidence), socially integrative (i.e., connecting with others), and tension release (i.e., escaping). Of particular interest is that online social media (i.e., email, chat rooms, and listservs) are distinctive tools used for integrative social purposes, enhancing direct connections with family, friends, and others (West & Turner, 2010). New media technologies (online social networking) enhance individuals' abilities to search for information, procure entertainment (West & Turner, 2010), and interact through media mediated communications--more than do other traditional media (Ruggiero, 2000). Consequently, individuals satisfy more goal-oriented behaviors, requiring an expanded uses and gratification theory (Ko, Cho, & Robert, 2005; Rayburn, 1996).

A number of researchers (e.g., Ko, Cho & Robert, 2005; Korgaonkar & Wolin, 1999; Lin, 2006; Par, Kee, & Valenzuela, 2009; Raacke & Bonds-Raacke, 2008; Ridings & Gefen, 2004; West & Turner, 2010) explored users' online social media needs by examining their psychological and behavioral characteristics. Korgaonkar and Wolin (1999) argued that individuals using online social media seek information and entertainment like other media users do, with one significant difference. Interestingly, they not only seek information and entertainment through content media, but also through social interaction with other media users, engaging interactive tools such as group chat-rooms and message boards. Consequently, researchers must focus on personal as well as social reasons individuals use online social media.

Raacke and Bonds-Raacke (2008) explored the needs met and gratifications experienced while using social network websites like Facebook and MySpace, forms of popular social media in the mid-2000s. These social network websites are used for personal purposes to garner information about events, academic purposes, and abundant socially related activities: communicating with old and current friends and making new friends. Park, Kee, and Valenzuela (2009) investigated college students' use of social network websites and also noted socializing and self-status seeking as needs for participating in social media, in addition to entertainment and information gathering. Hence, individuals not only use social media for personal reasons such as entertainment (leisure and amusement needs) and information needs (social events, specific products and services), but also for socializing: meeting and talking with others to maintain personal status in peer support groups, assuring community cohesion, and making themselves appear "cool" (i.e., self-status seeking). Similarly, Korean online brand community members within social network websites reported social and psychological motivations for using an online brand community (Sung, Kim, Kwon, & Moon, 2010).

As in studies about social network websites, participants had social (i.e., interpersonal utilities) and personal motivations (i.e., entertainment, information, and convenience seeking) for using social media to discuss brands with other consumers. Also, as online brand communities have brand-specific content for members to discuss, there is a distinct reason to participate and develop brand liking. Brand interest leads consumers to continue participating in brand communities and share their specific brand interests with other consumers. Motivation of this nature is related to Muniz & O'Guinn's (2001) concept of "consciousness of kind" refers to consumers wanting to differentiate themselves from others by revealing their use of a specific

brand and grouping themselves through collective membership in a brand community (Muniz & O'Guinn, 2001).

Based on the Park et al. (2009), Raacke and Bonds-Raacke (2008), and Sung et al. (2010) studies that adopted uses and gratification theory, the present study postulates five major needs for using online brand communities—entertainment, information, convenience, socializing and self-status seeking.

H1. Individuals use online brand communities to satisfy their needs:

- a. entertainment,
- b. information,
- c. convenience,
- d. socializing
- e. self-status seeking.

Social Capital and Network Theory

Max (1933) defined *capital* as a surplus value from an assets network investment. Social capital theorists classified social capital as investment through social interactions in social networks to produce outcome values (Bourdieu, 1986; Burt, 1992; Coleman, 1988; Coleman, 1990; Erickson, 1995; Erickson, 1996; Flap, 1994; Flap, 1991; Lin, 1982; Lin, 1999; Portes, 1998; Putnam, 1993; Putnam, 1995). Social capital, then, involves intangible resources generated and accessed by social interactions through networks and specific social structures in society (Scott, 1991). It builds connections among and holds together individuals with shared interests and assumptions about social relations (Etzioni, 1996; Mathwick, Wiertz, & Ruyter, 2008). Therefore, social capital is an individual's own assets obtained and used for personal benefit, but

assets also acquired as a community asset—socially generated, maintained, and exchanged by individuals in the community (Burt 1997; Putnam, 1993; Putnam, 1995a; Wasko & Faraj, 2000).

Predicated on these notions, social capital applies to both individual and collective levels (Adler & Kwon, 2002; Mathwick, Wiertz, & Ruyter, 2008). At the individual level, social capital is a personal resource or set of resources that may be used for personal benefit and that can be obtained by individuals due to skills, achievements, reputation, role status, and factors such as family background (Burt, 1997). At the collective level, social capital is a group or organizational resource commonly used by all individuals of a social group that holds the social capital (Burt, 1997; Putnam, 1993). Social capital outcomes such as the creation and sharing of knowledge in a community (Adler & Kwon, 2002) function at the collective level because individuals are motivated to engage in resource exchanges to gain mutual benefit within a community (Nahapiet & Ghoshal, 1998).

Nahapiet and Ghoshal (1998) conceptualized the generation of collective level of social capital based on three dimensions. The combination and exchange of resources in a community are facilitated when individuals' are (1) in structural links or connections with others (structural capital), (2) have intellect and skills to communicate with others (cognitive capital), and (3) have positive and strong relationships with others and the group (relational capital). Researchers argued that at collective levels, social capital is more likely to generate a shared history when individuals are highly interdependent and interactive within a group (Nahapiet & Ghoshal, 1998; Nohria & Eccles, 1992). Consequently, researchers postulated that Internet interaction without face-to-face communication may reduce social capital generation (Ellison, Steinfield, & Lampe, 2007). However, other researchers argued that social capital is also generated and maintained through individual-level resource contribution in online networks (Chiu, Hsu, & Wang, 2006;

Mathwick, Wiertz, & Ruyter, 2008; Wasko & Farai, 2005). Online social networks provide new social structures, permitting individuals to interact with numerous physically disconnected, unknown participants. In addition, online networks largely involve weak and loose social connections used to form and maintain information exchange and diffusion (Donath & Boyd, 2004). Studies have also suggested the presence of increased social capital in online networks because relationships generating social capital are based on individuals, and social capital originates with individuals' level of knowledge achievement and contribution to a community (Wasko & Faraj, 2005).

Moreover, the absence of face-to face online communication (in-person interaction) is compensated for by online interactions such as chatting and email, boosting social interactions offline (Wellman, Haase, Witte, & Hampton, 2001). For example, studies of online community (e.g., geographical communities) suggest that interactions through online networks supplement community (i.e., collective) interactions, involvement, and social capital generation (Hampton & Wellman, 2003; Kavanaugh, Carroll, Rosson, Zin, & Reese, 2005). Individuals maintain relationships with distant acquaintances and access ideas and information via weak ties in online networks (Chu, 2011). Relying solely on weak ties generated by online networks, individuals select numerous easy and inexpensive social capital bridges (i.e., social network ties) for sharing information with each other (Danath & Boyd, 2004) and achieve bonding social capital, providing emotional support and resources that usually transpire only in strongly tied relationships (e.g., family and close friends) (Ellison, Steinfield, & Lampe, 2007; Williams, 2006; Chu, 2011).

Social capital in an online network therefore is generated and accumulated among individuals via social interaction and acting collectively as a whole. Based on these online

network characteristics, this study adopts Nahapiet and Ghoshal's (1998) dimensions to explain how individuals interact in relation to others to create and contribute to benefits in an online brand community. Each of the constructs is described in the following section.

Social Capital Accumulations

Structural Capital

Nahapiet and Ghoshal (1999) reported that social capital generated by network ties provides access to resources. Indeed, social interaction ties (structural links) between individuals in a network provide channels for accessing information and resources (Tsai & Ghoshal, 1998). Individuals are embedded in an online environment during their online social interactions by posting messages or responding to messages posted by others, creating social interaction ties between individuals by yielding information, resource creation and sharing (Wasko & Faraj, 2005). Community members simultaneously become knowledge contributors and recipients by communicating and interacting within a network. Such behavior within a social network is an important attribute of social capital according to social capital theory (Cohen & Prusak, 2001; Nahapiet & Ghoshal, 1999; Wasko & Faraj, 2005). An online community member gains social capital through interaction because social ties are strengthened, other members may benefit from the contribution, and the individual feels that he or she has contributed to the community, thereby increasing a personal sense of belonging.

Consequently, Ahuja, Galletta, and Carley (2003) and Wasko and Faraj (2005) argue that the strength of structural capital is measured by the quantity of an individual's social interaction ties. Chiu, Hsu, and Wang (2006) described strength of social interaction ties as the strength of emotional intensity between individuals, the amount of time spent, and communication frequency in a network. These positively influence sharing of information and resources among

community members. Consequently, in this study, social network ties among online brand community members represent the strength of emotional ties, frequency of interacting, and amount of time spent interacting among members in an online brand community.

Cognitive Capital

To create social capital based on interaction with others, it is essential to have shared understanding and language (i.e., cognitive capital) (Nahapiet & Ghoshal, 1998). Cognitive capital positively influences accessibility and capability to understand and apply new knowledge as embodied in attributes to increase social capital, such as shared codes, language, and narratives, whereas structural capital provides accessibility to resources (Nahapiet & Ghoshal, 1998). These attributes are prerequisites for sharing a common understanding between members in a community (Tsai & Ghoshal, 1998). Considering the research setting, an online brand community is where consumers share ideas and information about specific products and brands with other consumers who share the same interests about products and brands. This proposed study examines shared language and visions that prior investigators have suggested measure cognitive capital in an online community.

Shared language. Wasko and Faraj (2005) noted that individuals use language to share their interpretation of their environment or level of expertise. Community members create a shared language reflecting similar practices, skills, knowledge, and narratives. In a community, members combine and share resources and enable individuals to (1) access shared information, (2) evaluate the benefits of exchanging resources, and (3) exchange experience and information with each other within a community (Nahapiet & Ghoshal, 1998). The use of mutually understood terms or jargon and writing styles in communication positively influences

interactions among members (Chiu, Hsu, & Wang, 2006). Hence, shared language is essential in an online brand community to facilitate social exchange among members.

Shared vision. Members share collective goals and aspirations and create a shared vision for a community (Tsai & Ghoshal, 1998). Individual members perceive a community as having common goals and interests, which in turn benefits the whole community by facilitating each member's exchanges and combining of resources to increase individual cognitive capital (Tsai & Ghoshal, 1998; Chiu, Hsu, & Wang, 2006). Consequently, the shared vision between members of the brand community is an essential prerequisite for an accumulation of social capital.

Relational Capital

Relational capital, one dimension of social capital, is emotion and feeling toward relationships within a community (Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005). Relational capital at the individual level is generated when (1) individuals have a strong online community identification (Chui, Hsu, & Wang, 2006), (2) trust other members in an online community (Chui, Hsu, & Wang, 2006; Mathwick, Wiertz, and Ruyter, 2008; Wasko & Faraj, 2005), (3) perceive a responsibility to participate in an online community (Mathwick, Wiertz, & Ruyter, 2008; Wasko & Faraj, 2005), and (4) recognize mutual and cooperative norms within an online community (Chui, Hsu, & Wang, 2006; Mathwick, Wiertz, & Ruyter, 2008; Wasko & Faraj, 2005). Four relational capital dimensions relevant to an online brand community structure have been indicated in prior research: 1) volunteerism, 2) social trust, 3) reciprocity, and 4) identification.

Identification. This refers to "the process whereby individuals see themselves as one with another person or group of people" (Nahapiet & Ghosal, 1998, p. 256). In the present study brand community identification--defined as perceiving oneself as included in an online brand community and differentiated from online brand community outsiders--is similar to identification

in an online community as defined by Bagozzi and Dholakia (2002). The sense of belonging to an online community evokes positive emotional feelings toward that community (Chui, Hsu, & Wang, 2006). Therefore, by identifying with the community, individuals are willing to commit to relationships within the community (Bagozzi & Dholakia, 2002; Dholakia & Bagozzi, & Pearo, 2004) and are motivated to exchange and combine information and resources with other members of the communities (Chui et al., 2006; Nahapet & Ghoshal, 1998). Within the context of an online brand community, as consumers share common interests in specific brands and products, they quickly feel integrated into the community and identify with it. This identification motivates them to interact with other members and generates social capital as they comfortably share resources and knowledge about brands and products.

Trust. Trust facilitates exchange and combining of information and resources (Coleman, 1999). Studies in a variety of online settings refer to trust as a set of beliefs in others' ability, integrity, and benevolence. Trust is related to one's motivation to engage in knowledge creation through exchanging and combining information and resources (Ridings, Gefen, & Arinze, 2002). Trust has been considered to be an antecedent to participating in a community (Chiu, Hsu, & Wang, 2006; Mathwick, Wiertz, & Ruyter, 2008; Nahapet & Ghoshal, 1998; Ridings, Gefen, & Arinze, 2002; Tsai & Ghoshal, 1998). However, trust does not influence all aspects of online community practices. Trust towards other members does not influence participation frequency, but influences value of exchanging and combining information and resources in online communities--and also influences quality of perceived social capital in a network (Chiu et al., 2006). The structural character of online networks may explain this. They are composed of numerous weak ties that do not easily build relational capital; there is relatively little shared history, interdependence, and co-presence compared with a face-to-face network (Nahapet &

Ghoshal, 1998; Cohen & Prussic, 2001; Wasko & Faraj, 2005). Considering the environment of online brand communities, trust and integrity explain how individual beliefs generally follow accepted values, norms, and principles to interact in an online brand community.

Community Voluntarism. Community voluntarism is an obligation and duty to help other members (Mathwick, Wiertz, & Ruyter, 2008). The expectation for voluntarism is developed within particular relationships and leads to interaction in a community (Wasko & Faraj, 2005). However, interaction in the online brand community environment often occurs between strangers. It means that the level of interdependence and shared history between members are low, even though these linkages are crucial to the generation of social capital (Nahapiet & Ghoshal, 1998; Wasko & Faraj, 2005). Also, the absence of face-to-face meetings, commitment toward the community, and limited cohesion leads to a relatively loose motivation for solving common problems and pursuing common interests (Paxton, 1999).

However, online an individual has the freedom to join or leave a culture, instead of habitually responding to community obligations to appear in person or fulfill social expectations (Mathwick, Wiertz, & Ruyter, 2008). The free will volunteer membership invites individuals to proactively engage in communities and make valuable contributions (Putnam, 1993) by recognizing a sense of responsibility to a shared membership and communicating with others to share information and resources about products and brands in online brand communities. A sense of obligation to the online community prompts individuals to post valuable advice for others (Constant, Sproull, & Kiesler, 1996). Personal expectations, such as enriching knowledge, seeking support, and making friends within online communities inspire individuals to engage in knowledge sharing behavior (Andrews, 2002).

Also, to strengthen the operation of, and help grow the online community, individuals engage in interactions and share knowledge (Bock & Kim, 2002; Kolekofski & Heminger, 2003). If individuals are motivated to exchange and combine information and resources, they feel their activities will benefit the community's reputation or strengthen ties between members (Chiu, Hsu, & Wang, 2006). Therefore, online brand community members, who have a strong sense of volunteerism that will assist other members of the facility and facilitate the community, should be more likely to have motivation for sharing information and resources about products and brands, thereby increasing their own social capital.

Norms of Reciprocity. A mutual sense of gratification creates norms of reciprocity. Individuals expect their service to others will be returned at a beneficial time and endorse ongoing supportive exchanges with each other (Onyx & Bullen, 2000; Shumaker & Brownell, 1984). This reciprocal support among strangers, based on weak ties, exists in online networks. For example, individuals expect their support will be returned in the form of exchanges, such as in-kind, alternate forms of aid (e.g., having answers and replies), or companionship for helping a mutual friend in an online social network (Wellman & Guilia, 1999). In Chiu, Hus, and Wang's (2006) study, the amount of knowledge members shared within an online community increased as they perceived a strengthening sense of reciprocity. According to Wasko and Faraj (2000), individuals perceived their supportive exchanges as moral obligations, such as answering others' postings and helping other members because they belong to the community. Consequently, with a strong generalized norm of reciprocity, online communities will continue to grow (Giesler, 2006) and foster social capital accumulation.

According to the literature review above about social capital dimensions applied in an online brand community context, individuals' interactions in an online brand community

accumulate three dimensions of social capital: structural, cognitive, and relational capital. Indeed, individuals' interactions with others create and contribute benefits shared collectively in an online brand community. Consequently, applying Nahapiet and Ghoshal's (1998) social capital dimensions at the individual level, this study examines how an individual's social network ties, cognitive capital, and relational capital influence accumulations of social capital collectively in an online brand community.

H2: As (a) structural, (b) cognitive, and (c) relational capital strengthen, the level of social capital will increase in an online brand community.

Outcomes of Social Capital Accumulation

Scholars have approached social capital "as the process of accumulation as well as its outcomes" (Mathwick, Wiertz & Ruyter, 2008, p. 833; see also Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998). An online brand community encourages unique interactions among anonymous consumers, and these interactions may be capable of generating social capital accumulation. Indeed, social capital can be a social asset individual consumers obtain as they interact with other consumers through social networks in an online brand community. Consumers may influence, and may be influenced, by other consumers with social capital in an online brand community; individuals use resources collected in an online brand community for use in future consumption or social activity. Hence, the proposed study focuses on individuals' levels of social capital accumulation and subsequent consequences.

Individual researchers (Wasko & Faraj, 2005; Chiu, Hsu, Wang, 2006; Mathwick, Wietz, & Ruyter, 2008) have employed Naphaiet and Ghoshal's (1998) dimensions to measure social capital accumulations with perceived structural, relational, and cognitive capital and to examine

relationships with outcomes such as knowledge contribution and community commitment at individual levels of online social networks.

Wasko and Faraj (2005) examined how individuals' social capital--based on constructive, cognitive, and relational capital--influences their knowledge contribution behaviors in a voluntary online community. They found that structural capital, based on an individual's structural ties created as responding to others' postings, increases the likelihood that an individual will give helpful contributions to an online community. However, cognitive capital based on self-rated expertise and tenure in the field and relational capital based on expectations of reciprocity of others do not increase the likelihood of helpful contributions.

Chiu, Hsu, and Wang (2006) investigated individual members' quality and quantity of knowledge sharing behavior within a professional online community. The underlying facets of social capital based on Nahapiet and Ghoshal's (1998) three dimensions of social capital were examined. Structural capital founded on social interaction ties and relational capital based on expectation of reciprocity and identification of a community has a significant positive relationship with individual's knowledge sharing quantity, but not perceived quality of shared knowledge in an online community. Relational capital based on trust does not significantly influence quantity of knowledge sharing within the community. Cognitive capital based on a shared vision within a community was negatively related to quantity of knowledge sharing, but positively related to perceived quality of shared knowledge in an online community.

Mathwick, Wiertz, and Ruyter (2008) examined social capital based on relational norms such as voluntarism, reciprocity, and social trust in an online community. They found that social capital generated by relational norms is positively related to the perceived social value of a community and influence on community commitment.

Based on the afore mentioned network and social capital studies, the combined effects of structural (i.e., social network ties), cognitive (i.e., shared language, vision), and relational (i.e., identification, trust, reciprocity, volunteerism) capital constitute social capital in this study. Social capital is proposed to lead to various outcomes, ultimately determining productive resources for the community (Nahapiet & Ghoshal, 1998). In the following section, the set of outcomes “social capital” may generate in an online brand community are discussed.

Knowledge Sharing

Consumers may exchange knowledge based on experiences with or information held about brands and products. Although there is no research regarding how social capital moves consumers to share and create knowledge about specific brands with other consumers, there are several social capital studies that have investigated online users’ knowledge-sharing behavior in various online communities.

Burt (1992) argued that as individuals build relationships with a large number of members and become part of the central network, they are more likely to contribute collectively. Various researchers have examined how structural social capital plays an important role underlying voluntary knowledge exchange in online networks. Wasko and Faraj (2005) examined how social capital influences knowledge contribution in online networks--a social tie or structural link created as responses to others’ postings positively influence their voluntary knowledge contribution. In addition, Chiu et al. (2006) found positive relationships between volume of knowledge sharing and the amount of time spent among members with the online community. Individuals perceived stronger social network ties with other members as they increasingly expected mutual reciprocity with members in exchange for their shared experience

and knowledge. This perception increased their interactions, such as posting ideas and responding to others' comments (Chai, Das, & Rao, 2012).

Shared visions within an online community influence community members' intentions to share knowledge, increasing trust in the online community (i.e., reliability of a community, caring for members' welfare, and helping members increase their knowledge) (Chang, Yen, & Cheng, 2009). According to Chiu et al. (2006), shared visions and language have a significant impact on perceived knowledge quality shared within an online community.

Ho, Kuo, and Lin (2012) reported that perceived social identification with and trust toward a group in offline communities continued as online knowledge sharing when the online community was based on offline groups. According to Chai et al.'s (2012) study of online users' knowledge sharing behaviors, individuals apply offline social norms, such as trust toward other users, information sharing, and shared reciprocity, when considering knowledge sharing behaviors in online networks. Trust that other users would not harm them is more important to users' decisions to share their knowledge, such as updating useful documents, files, and updating their feedback/comments to other users (Chai & Kim, 2010; Chai et al., 2012; Chiu et al., 2006). However, trust in safety or a secure Internet service did not influence their interaction behaviors (Chai & Kim, 2010; Chai et al., 2012). Therefore, social capital accumulations based on structural, cognitive, and relational dimensions promotes contribution and creation of knowledge as exchange resources. Increasing social capital influences consumers' knowledge sharing in an online brand community.

H3: As social capital strengthens, an individual's level of knowledge sharing increases.

Community Commitment

In offline contexts, *commitment* is defined as aspiration to sustain a valued relationship (Moorman, Zaltman, & Deshpande, 1992) based on emotional attachment toward a community (Staw, 1990). Commitment acts as a mediator leading to behavioral outcomes (Wiener, 1982) such as a strong community membership.

According to Staw (1990), commitment can be either attitudinal or behavioral. In an online community context, commitment is referred to as “each member’s attitude toward the community” (Jang, Olfman, Ko, Koh, & Kim, 2008, p. 62), which elicits members’ outcomes in an online community. Continuous participation in helping other members’ problem-solve and interaction with other members are examples of behavioral outcomes (Jang, Olfman, Ko, Koh, & Kim, 2008). Consequently, online community commitment is an emotional attachment resulting in a positive attitude among members toward the community. Community commitment includes not only emotional attachment toward but also behavioral outcomes (i.e., participation in and recommendation of the community) in an online brand community, as commitment results in the formation of consumer loyalty and behavioral intention (Morgan & Hunt, 1994).

In addition, online brand community commitment mediates the degree to which members’ interactions (i.e., information exchange within the community) are extended to loyal brand members (Jang, Olfman, Ko, Koh, & Kim, 2008). Individuals’ community commitment is important to maintain an online community because it is difficult to facilitate members’ cohesion and interactions given the absence of a geographical base (Jang et al., 2008).

As social capital is shared among online brand community members, a sense of belonging to the community is manifested and elicits positive attitudes and engagement in the community (Bagozzi & Dholakia, 2006). For example, in Bagozzi and Dholakia’s (2002) study,

members' positive anticipated emotions and desires and social identity components (i.e., a cognitive awareness of one's membership in a social group, a sense of emotional involvement with the group, group based self-esteem) prompted members to support and maintain a brand community.

In a consumer-generated online brand community, consumers' participation is voluntary and uncontrolled; members join willingly and content postings are not manipulated by the company. In turn, this helps build trust in the community and influences community commitment (Jang et al., 2008). For example, consumers had more commitment to an online brand community that proactively accepted any opinion about the brand (Kim, Choi, Qualls, & Han, 2008). Social interaction ties have value in the online community, increase the community's social support system, and influence community commitment to solve a problem (Algesheimer, Dhokalia, & Herrmann, 2005; Hagel & Armstrong, 1997). Members become emotionally attached to the community; they have a sense of belonging and partake of group pride (Bagozzi & Dholakia, 2006). Consumers' identification with an online brand community positively influences their psychological bond to it (Carlson, Suter, & Brown, 2007). Therefore, social capital increases social interactions such as exchange of information and resources. Consequently, social capital provides social support to solve problems positively and influence consumers' commitment to the online brand community.

H4: As social capital strengthens, an individual's level of community commitment increases.

Needs to Use Online Brand Community and Social Capital Accumulations and Outcomes

This study applies uses and gratification theory to understand motivations and needs for belonging to an online brand community. Consumers expect to interact with others, such as commenting on others' comments while participating in an online brand community. Positive

beliefs and expectations about outcomes cause individuals to engage in resource exchange behavior (Bandura, 1982). Consequently, if consumers expect their needs to be satisfied by interacting with other consumers in an online brand community, their attitude toward community commitment is positively influenced. This expectation is increased by social capital perceived to be gained by belonging to the online brand community. For this, individuals invest their time and efforts to develop a network that is a type of structural capital, and to share social capital by building cognitive components such as trust and norms of reciprocity in an online brand community. Trust toward others and the community facilitates interacting with others on shared issues in the community (Putnam, 2004) and results in belonging to the online brand community. Also, individuals can communicate with others and interpret information because relational capital such as shared language (Wasko & Faraj, (2005) and vision (Chiu et al., 2006; Tsai & Ghoshal, 1998) are prerequisite to seeking information, convenience, entertainment, socialization, and self-status.

In short, individuals' gratification of social and individual needs to use an online brand community are by-products of social capital. Finally, the expectation of needs gratified by using an online brand community influences social capital accumulations (i.e., structural, cognitive, and relational capital).

H5: Needs to use an online brand community positively influence structural capital.

H6: Needs to use an online brand community positively influence cognitive capital

H7: Needs to use an online brand community positively influence relational capital.

Individuals' needs to use an online brand community cause them to engage in knowledge sharing and community commitment. For example, individuals use online media to satisfy their needs to search for information (Adler & Kwon, 2002; Inkpen & Tsang, 2005; Ridings & Gefen,

2004) through information search behaviors (i.e., asking and answering questions) in order to create new information resources and knowledge. Consequently, as individuals invest more effort (information seeking) and experience reciprocal benefits, they engage more in information sharing (Clark & Mills, 1993). According to Sung, Kim, Kown, and Moon's (2010) study of online brand community participation, information and entertainment seeking, as well as social motivations such as socializing, are antecedents for predicting community commitment.

Consumers are motivated to share their interests in certain brands with other consumers. Sukoco and Wu's (2010) study confirmed that socially related motivations, such as affiliation searching and confirmation of social status, positively influence consumers' participation in an online brand community. Consumers' preference for specific brands is also influenced by the online brand community commitment. Therefore, as consumers participate in social interaction with others to gratify their needs to use an online brand community, they become involved in knowledge sharing and develop community commitment.

H8: Needs to use an online brand community positively influence knowledge sharing.

H9: Needs to use an online brand community positively influence community commitment.

Brand Related Attitude and Behaviors

Brand Loyalty

Brand loyalty is defined as the level of consumer emotional attachment to a certain brand (Aaker, 1991). Commitment to a brand often develops into brand loyalty and generates the repurchasing of a brand product or service (Oliver, 1999); it is brand loyalty that drives brand repurchasing and recommendations to others. Consequently, loyalty has behavioral and attitudinal components (Aaker, 1991, 1999; Harris & Goode, 2004; Oliver, 1997).

According to Oliver (1997), loyalty includes sequential phases with cognitive, affective, conative, and action related aspects. Cognitive loyalty is referred as consumers' beliefs that a brand is preferable to other competing brands. Affective loyalty is referred as favorable attitude toward brands' performance and services. Conative loyalty is a deeper level of commitment with behavioral intention based on the development of affective and conative loyalty. As a sequential phase of cognitive and affective loyalty, consumers actively attempt to find beliefs and positive attitudes toward brands. Finally, action loyalty is intention to purchase brands and a willingness to overcome impediments to acquisition.

In studies of brand communities, members participating in the communities are urged to have a preference for the brand, attend brand events, participate in word-of-mouth brand promotion and share the brand's history (Carlson, Suter, & Brown, 2008; McAlexander, Schouten, & Koenig, 2002; Muniz & O'Guinn, 2001). On-line community commitment and knowledge sharing may increase members' perceptions of brand value through positive attitude toward information shared in a community. Consequently, it helps to have positive attitude toward the brand such as identifying with the group which endorses the brand on a community level (Carlson, Suter, & Brown, 2008). According to Jang et al. (2008), if consumers have a strong sense of belonging, emotional attachment, trust, satisfaction, and need to participate in an online brand community, they show more loyalty toward a brand by recommending and purchasing it. Also, knowledge sharing has a stronger positive effect on brand loyalty when members perceive higher knowledge-based trust (Wu & Sukoco, 2010). Therefore, social capital accumulations generated by interaction among consumers influence their brand loyalty and outcomes of social capital such as facilitating exchange of and creating knowledge and commitment in online brand communities are expected to lead to consumers' brand loyalty.

H10: Social capital accumulations positively influence brand loyalty.

H11: Outcomes of social capital accumulations positively influence brand loyalty.

Proposed Model

Based on the theoretical framework and literature review, a model was developed which shows the hypothesized relationships among needs to use an online brand community, social capital accumulations and outcomes, and brand related behaviors (see Figure 1.1). The proposed model examines how needs to use online brand communities produce brand related behavioral outcomes mediated by social capital within an online brand community.

Hypotheses generated in this chapter are incorporated in the model. In the proposed model, the multiple dimensions of social capital — structural, cognitive, and relational capital — are related to the level of knowledge sharing (H3) and brand community commitment (H4) and brand loyalty (H10). This model also hypothesizes relationships between needs to use an online brand community, social capital accumulations (H5, H6 and H7), and outcomes such as knowledge sharing (H8) and community commitment (H8). Finally, the model proposes that social capital outcomes — knowledge sharing and community commitment — influence brand loyalty (brand related attitude and behavior) (H11).

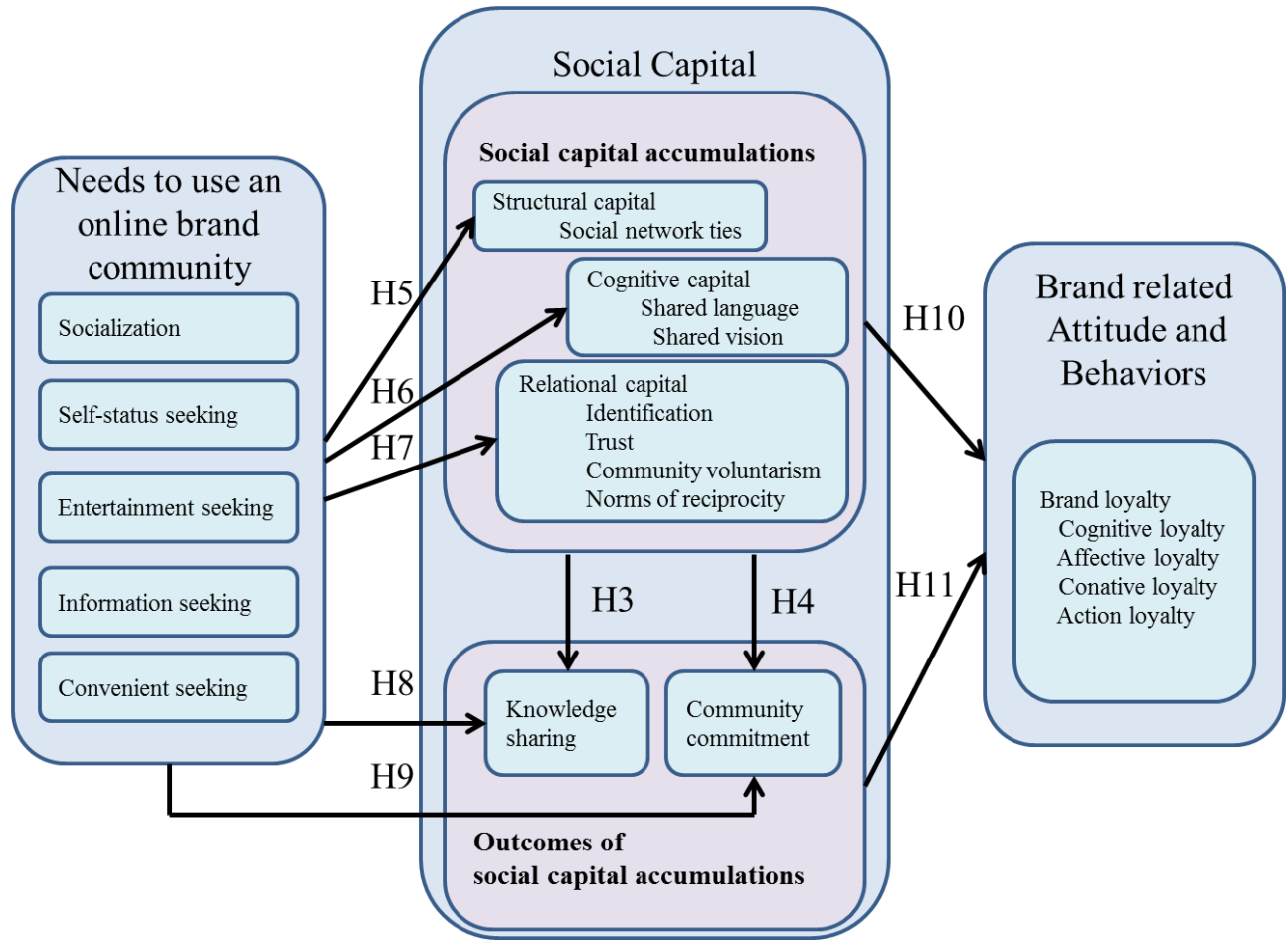


Figure 1.1. Theoretical Model of Relationships among Needs to Use an Online Brand Community, Social Capital Accumulations and Outcomes, and Brand Related Attitude and Behaviors

CHAPTER 3. METHOD

To assess the five research questions, an online survey was conducted. This chapter includes descriptions of the sample and data collection, pretest, instruments, and data analysis.

Sample Description and Data Collection

To examine the research questions, US consumers who were engaged in an online brand community were recruited through Amazon Mechanical Turk (AMT), an online marketplace for work that requires human resources. Requesters (task creators) hire workers (paid task completers) to do human labor in a computer-based environment. For researchers, AMT provides tools to distribute an online survey, as well as access a large participant pool with diverse demographic backgrounds. For participants, AMT gives an opportunity to volunteer for a wide selection of surveys that can be completed at their convenience and to receive credits accordingly. These credits can be paid automatically or manually. Researchers can refuse giving credits for unsatisfactory quality work.

Researchers find that data from Amazon Mechanical Turk are as reliable as those collected via other internet sources in social sciences (Buhrmester, Kwant, & Gosling, 2011; Casler, Bickel & Hackett, 2013). Specifically, behavioral research results based on data collected from social network websites users age 19 and over (i.e., Twitter, Facebook, Reddit) and Amazon Mechanical Turk workers age 18 and over (Casler, Bickel & Hackett, 2013) are indistinguishable.

To collect data, an online survey was published to recruit at least 500 participants in Amazon Mechanical Turk. Only AMT workers who were located in the United States were qualified through a preview screening process to participate in the study. Each participant had 45 minutes to complete the survey and receive a credit (75 cents).

To select a sample of consumers who belonged to online brand communities, a screening question asked whether participants were a member or a visitor of an online apparel, shoe, or accessory brand community. Online brand communities were defined for participants as an online community formed on the basis of attachment to apparel, shoe, and accessory brands. Also, it was explained to participants that online brand communities in this study included: (1) consumer-generated and (2) brand-generated communities. Consumer-generated online brand communities were defined for participants as online communities voluntarily initiated and operated by enthusiastic consumers for the purpose of exchanging information and experiences about brands and products (e.g., www.niketalk.com, www.effortlessanthropologie.blogspot.com). Brand-generated communities were defined as purposefully initiated and controlled by marketers to build relationships with consumers. These definitions were provided in an effort to inform consumer feedback about their brands and products from a marketing point of view (e.g., <http://blog.urbanoutfitters.com>). Also, online brand communities were defined as including those which are embedded in social network websites such as Facebook, Twitter, etc. (e.g., <https://www.facebook.com/jcrewaholics>, <https://www.facebook.com/gap>).

Approval of the Use of Human Subjects

The Iowa State University Human Subject Review Committee reviewed and approved the data collection procedure (Appendix A), the recruiting message posted in Amazon Mechanical Turk (Appendix B), and survey questionnaire including the informed consent form (Appendix C). The rights and welfare of the human subjects were appropriately protected from foreseeable risks to the subjects. Confidentiality of data from voluntary participants was secured.

Pretest

A pretest was conducted with eight graduate students at a Midwestern university who are familiar with brand communities. They were recruited from classes in Textiles and Clothing by asking for volunteers for the pretest. Pretest participants were asked to complete the web-based survey and to suggest problems or difficulties they had when completing the questionnaire. The pretest assessed clarity of questionnaire items and scales, content of the instructions and participation time for the survey. Based on the pretest results, the questionnaire and survey procedure were modified.

Instruments

Measures in the questionnaire were developed by adapting measures validated in prior research, converting some wording to reflect the current research setting, using definitions for items developed by the online brand community, incorporating prior studies into the questionnaire format, and observing selected online brand communities. A seven-point Likert-type scale (1=strongly disagree, 7= strongly agree) was utilized to assess the items.

Needs to Use an Online Brand Community

To measure online brand community uses and gratifications, respondents were provided a list of 24 statements regarding specific reasons for using an online brand community, including information seeking (information acquisition about brands and products), entertainment seeking, socializing (social interaction) with other consumers, self-status seeking (peer pressure/self-satisfaction), and convenience seeking. These scale items were derived from prior literature describing online brand community participation (Dholakia, Bagossi, & Pearo, 2004; Sung, Kim, Kwon, & Moon, 2010), Internet use (Ko, Cho, & Robert, 2005), and online social network use

(Park, Kee, & Valenzuela, 2009). The items were modified and additional items were added to tap the context of social network websites and daily life.

To measure socializing, items included were:

“I visit this online brand community to receive peer support from other consumers,”

“I visit this online brand community to meet interesting people,”

“I visit this online brand community to feel like I belong to a community,”

“I visit this online brand community to talk about something with other consumers,”

“I visit this online brand community to stay in touch with other consumers I know.”

To measure entertainment seeking, items included were:

“I visit this online brand community because it is funny,”

“I visit this online brand community because it is exciting,”

“I visit this online brand community because it is enjoyable,”

“I visit this online brand community to relax,”

“I visit this online brand community to pass the time when bored,”

“I visit this online brand community to be entertained.”

To measure self-status seeking, items were included:

“I visit this online brand community because I feel peer pressure to participate,”

“I visit this online brand community, because it makes me look cool,”

“I visit this online brand community, to develop my career through community participation,”

“I visit this online brand community to gain insight about myself.”

To measure information seeking, items included were:

“I visit this online brand community to receive information about products and services of the brand,”

“I visit this online brand community to learn about brand events,”

“I visit this online brand community to solve problems,”

“I visit this online brand community to do something for me,”

“I visit this online brand community to make decisions,”

“I visit this online brand community to learn how to do things.”

To measure convenience seeking items included were:

“I visit this online brand community because I can obtain what I want for less effort,”

“I visit this online brand community because I can use it anytime, anywhere,”

“I visit this online brand community, because it is convenient to use.”

Social Capital Accumulations

To measure consumers' perceived social capital through interaction with others in an online brand community, measurement items were adapted from the literature. Social interaction ties was assessed with items adapted from Tsai and Ghoshal (1998), Chiu, Hsu, and Wang (2006), and Chen, Chen, and Kinshuk (2009). These items measured three attributes of the content of social network ties: 1) close relationships, 2) time spent interacting, and 3) frequent communication with other members.

The items were:

“I maintain close social relationships with some members in the online brand community,”

“I extensively exchange ideas with some members in the online brand community,”

“I know some members in the online brand community on a personal level,”

“I have frequent communications with some members in the online brand community.”

Shared vision and language were assessed with items based on Nahapiet and Ghoshal (1998), Tsai and Ghoshal (1998), and Chiu, Hsu, and Wang (2006). Shared vision measures consumers' perceptions of whether other members of the brand community share the same vision, goals, and values about exchange resources.

The items were:

“Members in the online brand community share the vision of helping others solve their professional problems,”

“Members in the online brand community share the same goal of learning from each other,”

“Members in the online brand community share the same value that helping others is pleasant.”

Items for measuring shared language focus on common terms, meaningful communication patterns, and message understandability. The items are:

“Members in the online brand community use common terms or jargon,”

“Members in the online brand community use understandable communication patterns during discussions,”

“Members in the online brand community use understandable narrative forms to post messages or articles.”

Trust measures were adapted from prior research (Tsai & Ghoshal, 1998; Ridings, Gefen & Arinze 2002; Chiu, Hsu, & Wang, 2006). Items reflect consumers' beliefs in other consumers' non-opportunistic behaviors, promise keeping, behavior consistency, and truthfulness in the online brand community.

The items were:

“Members in the online brand community will not take advantage of others, even when the opportunity arises,”

“Members in the online brand community will always keep the promises they make to one another,”

“Members in the online brand community would not knowingly do anything to disrupt the conversation,”

“Members in the online brand community behave in a consistent manner,” and

“Members in the online brand community are truthful in dealing with one another.”

Perceived reciprocity was assessed by measuring the fairness of sharing resources and information (Wasko & Faraj, 2000; Wasko & Faraj, 2005; Chiu, Hsu, & Wang, 2006; Mathwick, Wiertz, & Ruyter, 2008).

The items were:

“I know other members in the online brand community will help me, so it's only fair to help other members,”

“I believe members in the online brand community would help me if I need it.”

Identification was assessed with items adapted from Nahapiet and Ghoshal (1998), Bagozzi and Dholakia (2002), and Chiu, Hsu, and Wang (2006). These items measure consumers' sense of belonging, feelings of togetherness, and positive feelings toward an online brand community.

The four items were:

“I feel a sense of belonging towards the online brand community,”

“I have feelings of togetherness or closeness in the online brand community,”

“I have a strong positive feeling toward the online brand community,”

“I am proud to be a member of the online brand community.”

Voluntarism was adapted from three items to reflect willingness to share resources with others (Podsakoff, Ahearne, & MacKenzie, 1997; Mathwick, Wiertz, & Ruyter, 2008).

The items were:

“I assist members from the online brand community to find solutions to their problems,”

“I am willing to work together with other members to improve the online brand community experience,”

“I keep up with the latest technical developments to make useful contributions to the online brand community.”

Outcomes of Social Capital Accumulations

By adapting measures from Davenport and Prusak (1998) and Wasko and Faraj (2005), knowledge sharing with an online brand community was assessed. These items measure consumers’ perceived time spent and exchange of resources via communications with other consumers within the online brand community.

The items were:

“I usually spend a lot of time sharing knowledge with other members in the online brand community,”

“I usually actively share my knowledge with other members in the online brand community,”

“I usually involve myself in discussions of various topics rather than specific topics,”

“I usually respond to others’ comments on my messages.”

Community commitment items were adapted to reflect consumers’ emotional attachment toward an online brand community (Kim, Choi, Guals, & Han, 2008).

The items were:

“I have a sense of belonging to the online brand community,”

“I have psychological attachment to the members of the online brand community,”

“I think exchanging opinions with other members is important,”

“I expect I will continuously participate in online brand community activities,”

“I am an actively participating member of the online brand community.”

Brand Loyalty

Brand loyalty was measured by attitudinal and behavioral intention with four items each developed to measure cognitive, affective, conative, and action loyalty adapted from Oliver (1997)'s and Harris and Goode's (2004) four stages of loyalty.

Cognitive loyalty items reflecting belief of brands' preferable to others included:

“I believe that using the brand is preferable to other competing brands,”

“I believe that the brand has the best offers at the moment,”

“I believe that the features of the brand are badly suited to what I like,”

“I prefer the service of the brand to the service of competitors.”

Affective loyalty items reflecting a positive attitude toward a brand and service included:

“I have a negative attitude to the brand,”

“I dislike the brand offering,”

“I like the features of the brand services and products,”

“I like the performance and services of the brand.”

Conative loyalty items reflecting behavioral intentions based on cognitive and affective loyalty included:

“I have repeatedly found the brand is better than clothing, shoe and accessory brands,”

“I nearly always find the offer of the brand inferior,”

“I have repeatedly found the features of the brand inferior,”

“Repeatedly, the performance of the brand is superior to that of other clothing, shoe and accessory brands.”

Action loyalty reflecting behavioral intentions accompanied by a willingness to overcome impediments to such action (Harris & Goode, 2004, p. 141) included:

“I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands,”

“I will always continue to choose the features of the brand over other clothing, shoe, and accessory brands,”

“I would always continue to favor the offerings over other clothing, shoe, and accessory brands,”

“I will always be willing to try new products offered by the brand.”

The measure included a seven-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7). Higher scores reflect higher intention to be a loyal consumer toward a brand.

Demographic/Background Questionnaire

Demographic variables such as age, gender, education level, and ethnicity were included to describe the sample characteristics of this study. Also, Internet and online brand community usage was asked. To measure internet usage, time spent online per day was asked (1 = less than one hour, 2 = one hour-less than two hours, 3 = two hours-less than three hours, 4 = three hours-less than four hours, 5 = four hours-less than five hours, 6 = five hours-less than six hours, 7 = six hours-less than seven hours). To measure online brand community usage, the level of visiting

and the duration of each visit to an online brand community were asked. The levels of visiting an online brand community are (1) rarely, (2) once a month, (3) once every two weeks, (4) once a week, (5) two to four times a week, (6) five to six times a week, and (7) once a day. The levels of duration for each visit to an online brand community was measured with (1) less than 10 minutes, (2) 10 to 30 minutes, (3) 30 to 60 minutes, (4) one to two hours, and (5) over two hours.

Data Analysis

To test the hypotheses, data analysis consisted of preliminary analyses and causal model analysis. Preliminary analyses include descriptive analysis, reliability, and correlation, using the Statistical Package for Social Sciences (SPSS) version 21.0. Casual modeling, including confirmatory factor analysis and structural equation modeling were conducted using the statistical package Mplus version 7 statistical software (Muthén & Muthén, 2000).

Preliminary Analysis

Descriptive analysis. Descriptive analysis included data from demographic items and Internet and online brand community usage. General properties of the variables were examined by testing means, standard deviations, and frequencies. Testing skewness and kurtosis, mathematical assessments, and histograms of frequencies and Q-Q plots, visual assessments, the central tendency and univariate normality for each variable was confirmed. Minimum and maximum values, the number of valid and missing data, and outliers of each data set variable were confirmed using frequencies.

Convergent validity. Convergent validity of the first-order, reflective constructs were assessed by testing composite scale reliability and average variance extracted (Chin, 1998). Utilizing Cronbach's standardized *alpha* coefficient, .70 or higher was considered as an acceptable cut-off and lower than .70 as more error and less reliable to determine composite

scale reliability of the multiple indicator measures (Fornell & Larcker, 1981; Hair et al., 1995; Nunnally & Bernstein, 1994).

Discriminant validity. Correlations among constructs were examined to assess discriminant validity. Correlations among constructs need to meet the criterion of $r < .85$ to demonstrate discriminant validity (Kline, 1998). Also, the square root of the average variance extracted (AVE) for each factor and comparing the AVE against correlations between that construct and other constructs within measures were assessed to confirm discriminant validity. AVE's needed to be greater than the minimum acceptance level of .50 (Fornell & Larcker, 1981).

Analysis of Causal Models

To test Hypothesis 1 to determine the structure of needs and gratifications to use an online brand community and for Hypothesis 2 to test the structure of social capital, confirmatory factor analyses with varimax rotation were conducted. Given that needs to use an online brand community and social capital were operationalized as reflective latent constructs, they are specified as the linear sum for each dimension. They can be estimated only if placed within a nomological net that incorporates consequences of the latent variable (Bollen, 1989).

Therefore, Hypotheses 3 through 11, which relate social capital outcomes and brand related behaviors, were simultaneously modeled to conduct structural equation modeling. To test the proposed model, structural equation modeling using Mplus examined relationships among multiple observe variables for each latent variable and a structural path connecting the latent variables. Structural equation modeling using maximum-likelihood estimation was conducted to validate measurement model and to fit the structural model by testing the goodness of model fit between the hypothesized model and the sample data (Byrne, 1998). The goodness of model fit was assessed with fit indices in *chi*-squared, standardized root mean squared residual (SRMR),

root mean squared error of approximation (RMSEA), and comparative fit index (CFI). A significant *chi*-square, with a smaller *chi*-squared value and a bigger probability of .05 or less indicates a good fit and that the hypothesized model's covariance structure is not significantly different from the observed covariance matrix (Bollen, 1989). SRMR values less than .80 are considered reasonable fitting model as evaluating discrepancies between the observed correlations and the model-estimated correlations (Hu & Bentler, 1999). RMSEA values more than .80 are considered indication of poor-fitting models; values at or less than 0.08 are considered reasonably fitting models (Brown & Cudeck, 1993; MacCallum, Browne & Sugawara, 1996). CFI values more than .90 indicate acceptable model fit to the data (Bentler, 1992).

CHAPTER 4. RESULTS

This chapter includes the demographic, social media use and purchase behavior description of the sample, preliminary analysis of research variables, and hypotheses testing results. The sample description is addressed using frequency and descriptive analysis. For the preliminary data analysis of variables, confirmatory factor analyses, correlations among variables, Cronbach's standardized *alpha* and average variance extracted were conducted to confirm measure reliabilities and validities. Structural equation modeling was used to test hypotheses.

Sample

A total of 978 workers in Amazon Mechanical Turk accessed the survey. Among them, 274 workers were disqualified as participants because they were not members or visitors of an online apparel, shoe, and/or accessory brand community. In addition, 192 whose surveys were only partially completed were not paid and excluded from survey responses. Finally, 512 complete survey responses acquired through Amazon Mechanical Turk with payment of 75 cents for each survey were gathered. Only 499 responses among them were actually included for analysis in this study because IP addresses of 13 participants were not geographically representative of the United States.

The final sample of 499 consumers included users of online brand communities representing 197 apparel, shoe, and accessory brands. This included 44.5% ($n = 222$) consumer-generated and 55.5% ($n = 277$) business-generated communities.

Demographic Description

The sample description includes participant demographics, average apparel product purchases, and Internet and online brand community usage. Frequency distribution, mean, and

standard deviation for measures using SPSS 21.0 were conducted to summarize the sample description.

The 499 consumers in the analyzed sample were 44.3% female and 54.3% male. About 80% of the respondents' ages ranged between 21 and 44.6, with a mean age of 30.33. Compared with the U.S demographic description of median age of 37.2 years, this sample is younger. A total of 73.5% of the respondents had some level of college education or had obtained a higher education degree (i.e., Bachelor, MS, MBA, PhD), indicating that the sample included individuals with a higher level of education than the average U.S. population.

Most respondents were White or European decent (75.1%), but the sample also included some diversity of ethnic groups (10.5% Black or African American, 8.1% Hispanic or Latino, 9.1% Asian or Asian American, and 1.8% Native American). The sample compared somewhat with the US demographic description of ethnicity for which: 72.4% are White or European American, 12.6% are Black or African American, 16.3% are Hispanic or Latino, and 4.8% are Asian American (U.S. Census Bureau, 2014). Consequently, this ethnic diversity under-represents African Americans slightly and Latino/Hispanics greatly, but over-represents Asian Americans in comparison to the U.S. population (see Table 4.1.).

Apparel Product Purchases

About 33.5% of the 499 consumers sampled purchased 9 or more apparel, shoe, and accessory products per month on average. About 11.7% reported purchasing 7 to 8 items per month, 19% reported purchasing 5 to 6 items, 23.8% reported purchasing 3 to 4 items, and 10.5 % reported purchasing 1 to 2 items per month on average. Only 1.4% of the respondents reported purchasing less than one item per month on average.

Internet and Online Brand Community Usage

About 91% of the 499 consumers sampled reported their level of Internet experience as “Experienced” or “Very Experienced,” and that they spend more than 4 hours per day engaged in Internet activity. About 72% of the respondents indicated they visit an online brand community more than once a week. Most participants (29.6%) indicated they visit an online brand community two to four times a week. Almost 13% of the respondents indicated they visit a brand community once a day or more, and many of the respondents (47.7%) stated their level of duration for each visit is between 10 and 30 minutes. Internet and online brand community usage of samples are shown in Table 4.1.

Table 4.1. Descriptive Statistics of Survey Sample Characteristics

Characteristics	Description	Sample Profile				U.S. Profile 2010 Census	
		Frequency	Percent	<i>M</i>	<i>SD</i>	Percent	<i>M</i>
Age				30.33	10.01		37.2 ^a
Gender							
	Male	271	54.3			49.2 ^b	
	Female	221	44.3			50.9 ^b	
Education							
	Less than high school	5	1			12.2 ^c	
	High school graduate (includes GED)	53	10.7			29.5 ^c	
	Associates degree or technical school degree	74	14.9			9.4 ^c	
	Attended some college	159	32.1			19.6 ^c	
	Bachelor's degree	158	31.9			18.7 ^c	
	Graduate degree (MS, MBA, PHD, etc.)	47	9.5			1.0 ^c	
Ethnicity							
	White or European American	373	75.1			72.4 ^d	
	Black or African American	52	10.5			12.6 ^d	
	Hispanic or Latino	40	8.1			16.3 ^d	
	Asian American	45	9.1			4.8 ^d	
	Native American	9	1.8			0.9 ^d	
	Other	6	1.2			9.3 ^d	
Level of internet experience							
	Very inexperienced	27	5.1				
	Inexperienced	1	0.2				
	Neutral	15	3				
	Experienced	142	28.8				
	Very experienced	308	62.5				
Internet Usage							
	Less than one hour	2	0.4				

Table 4.1 (Continued)

One to two hours	36	7.2
Two to three hours	72	14.5
Three to four hours	81	16.3
Four to Five hours	82	16.5
Five to Six hours	63	12.7
Six or more hours	161	32.4
Level of visiting an online brand community		
Rarely	20	4
Once a month	51	10.3
Once every two weeks	67	13.5
Once a week	82	16.5
Two to four times a week	147	29.6
Five to six times a week	65	13.1
Once a day or more	64	12.9
Level of duration for each visit to an online brand community		
Less than ten minutes	74	14.9
Ten to thirty minutes	237	47.7
Thirty to sixty minutes	132	26.6
One to two hours	43	8.7
Over two hours	11	2.2

^a U.S. Census Bureau. (2014). *Census Bureau Releases 2010 Census Demographic Profiles for the United States, Arkansas, Illinois, Indiana, Iowa, Louisiana, Maryland, New Jersey, Oklahoma, Oregon, South Dakota, Texas, Vermont and Virginia*. Retrieved Jan 7, 2015 from http://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn144.html

^b U.S. Census Bureau. (2011). *Age and Sex Composition: 2010*. Retrieved Jan 7, 2015 from <http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf>

^c U.S. Census Bureau. (2013). *Educational Attainment in the United States: 2013 - Detailed Tables*. Retrieved Jan 7, 2015 from <https://www.census.gov/hhes/socdemo/education/data/cps/2013/tables.html>.

The population 18 years and over, all races is used to calculate the percentages.

^d U.S. Census Bureau. (2014). *2010 Census population profile maps*. Retrieved Jan 7, 2015 from http://www2.census.gov/geo/maps/dc10_thematic/2010_Profile/2010_Profile_Map_United_States.pdf

Preliminary Data Analysis: Factor Structure and Reliability Assessment

First, confirmatory factor analysis, Cronbach's *alpha* coefficients, average variance extracted, and correlations among constructs were employed to test Hypothesis 1, thereby confirming and validating measures of needs to use an online brand community. Second, confirmatory factor analysis, Cronbach's *alpha* coefficients, average variance extracted, and correlations among constructs were used to test Hypothesis 2: the factor structure and validation of social capital accumulation measures. Third, confirmatory factor analysis was performed for all other variables in the hypothesized model, and scale reliability was determined by Cronbach's *alpha* coefficients for each of the measures.

Needs to Use an Online Brand Community

A confirmatory factor analysis, using 23 indicators and five latent variables, was performed to finalize items for the measure of consumers' need to use an online brand community. As a result of confirmatory factor analysis, one item was removed due to low factor loading below .50 (i.e., "I visit the online brand community to talk about the brand with other consumers"). This item may not be a relevant behavior for members of online brand communities.

Finally, with 22 indicators and five latent variables, the *chi*-square of 664.69 [$df = 197$], $p < .001$], CFI (.92), SRMR (.070), RMSEA (.69) values confirmed a good model fit (Hair, Black, Babin, Anderson & Tatham, 2006). Although the *chi*-square test rejected the hypothesis of perfect fit ($\chi^2 = 664.69$, $df = 197$, $p < .001$), the *chi*-square test should be considered a measure of fit rather than a strict test statistic, and the models are in a range of acceptable model fit with higher than .90 for CFI and lower than .08 for RMSEA and SRMR (Browne & Cudeck, 1992; Hair et al., 2006). The standardized factor loadings and *t*-values for each item of five factors of

needs to use an online brand community were statistically significant, as shown in Table 4.2. The Cronbach's *alpha* for five factors ranging from .81 to .90. As shown in Table 4.2, for reliability analysis the Cronbach's *alpha* value for items within all of the factors exceeded the cutoff point of .70, indicating high internal consistency among items within each factor.

Table 4.2. Confirmatory Factor Analysis and Reliability Testing of Dimensions of Needs to Use an Online Brand Community

Needs	Scale items	N=499	
		Standardized factor loadings	t-value
Socialization [$\alpha = .84$]	I visit the online brand community to receive peer support from other consumers.	0.61	19.39
	I visit the online brand community to meet interesting people.	0.86	49.78
	I visit the online brand community to feel like I belong to a community.	0.82	42.07
	I visit the online brand community to stay in touch with other consumers I know.	0.76	33.00
Entertainment Seeking [$\alpha = .90$]	I visit the online brand community because it is fun.	0.82	45.61
	I visit the online brand community because it is exciting.	0.89	67.62
	I visit the online brand community because it is enjoyable.	0.82	45.20
	I visit the online brand community to relax.	0.74	31.39
	I visit the online brand community to pass the time when I have nothing else to do.	0.54	15.67
	I visit the online brand community to be entertained.	0.75	33.70
Self-status Seeking [$\alpha = .84$]	I visit the online brand community because I feel peer pressure to participate.	0.70	23.80
	I visit the online brand community because it makes me look cool to others.	0.76	29.60
	I visit the online brand community to enhance my career through community participation.	0.86	40.88
	I visit the online brand community to gain insight about myself.	0.64	20.64
Information Seeking [$\alpha = .81$]	I visit the online brand community to receive information about products and services of the brand the community endorses.	0.78	33.02
	I visit the online brand community to learn about the brand events the community endorses.	0.54	15.02
	I visit the online brand community because it is a positive experience for me.	0.69	24.02
	I visit the online brand community to make decisions about my purchases.	0.78	33.29
	I visit the brand community to seek sales and promotion information about products and services of the brand the community endorses.	0.67	22.17
Convenience Seeking [$\alpha = .83$]	I visit the online brand community because I can obtain the brand products, service and event information for less effort.	0.70	24.63
	I visit the online brand community because I can use it anytime, anywhere.	0.84	41.95
	I visit the online brand community because it is convenient to use.	0.85	43.49
Fit indices		$\chi^2 = 664.69$ ($df=197$) CFI=.92, RMSEA=.069, SRMR=.070	

Correlations among the five factors were examined to assess discriminant validity. Correlations for the five factors of needs to use an online brand community ranged from -.12 to .67 (see Table 4.3), which satisfied Kline's (1998) criterion of $r < .85$ to demonstrate discriminant validity. Also, the square root of the average variance extracted (AVE) for each factor and comparing the AVE against correlations between that construct and other constructs within the needs to use an online brand community confirmed discriminant validity. AVE's were greater than the accepted level of .50, except information seeking (Fornell & Larcker, 1981). The low variance below .50 of the information seeking construct indicated that, on average, more measurement error remains in the items than variance explained by the information seeking construct structure (Hair, Anderson, Tatham, & Black, 1995).

Table 4.3. Correlations between Five Dimensions of Needs to Use an Online Brand Community

	Socialization	Entertainment Seeking	Self-status Seeking	Information Seeking	Convenience Seeking
Socialization	(.59 ^a)				
Entertainment Seeking	0.57***	(.59 ^a)			
Self-status Seeking	0.59***	.22***	(.55 ^a)		
Information Seeking	0.22***	.43***	-.12*	(.49 ^a)	
Convenience Seeking	0.08 (p = .15)	.35***	-.09 (p = .08)	.67***	(.64 ^a)

*** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$

^a In parentheses: Square root of the average variance extracted (AVE) is calculated from observed variables (items) as Std. loading^2 divided by $\text{Std. loading}^2 + \Sigma e_j$ (Hair et al., 1995)

Social Capital Accumulation

Confirmatory factor analysis using Mplus 7.0 was conducted to test Hypothesis 2, positing that structural, cognitive, and relational capital would reflect the construct of social capital accumulation as specified in Nahapiet and Ghoshal's (1997) social capital dimensions.

Structural, cognitive, and relational capital dimensions were generated by each of the three dimensions' characteristics on online brand community contexts. The structural capital dimension was generated by social tie strengthening item indicators. Cognitive capital dimension was generated by two conceptual definition indicators (i.e., shared language and shared vision). Relational capital was generated by four conceptual definition indicators (i.e., identification, trust, community voluntarism, norms of reciprocity).

A confirmatory factor analysis using 23 indicators and three latent variables was performed to finalize items for measuring social capital accumulation by using an online brand community. CFA loadings of each item with intended dimensions, ranging from .53 to .91, exceeded the suggested cut-off of .50 (Nunnally & Bernstein, 1994). During the CFA analysis, modification indices and item *t*-values were also evaluated, confirming that no items needed to be deleted. The final CFA indicated that the three-dimensional scale of social capital had an acceptable model fit: $\chi^2 = 1027.94$ ($df = 217$) CFI=.91, RMSEA=.087, SRMR=.072 (see Table 4.4). Based on the fit indices and acceptable Cronbach's α values exceeding .70 recommended by Nunnally & Bernstein (1994), no further modifications were necessary (see Table 4.4). Therefore, convergent validity of the measures of social capital accumulations using an online brand community was confirmed with the CFA loading of each item ranging from .53 to .91 (Nunnally & Bernstein, 1994) and statistically significant *t*-values ($p < .001$).

Discriminant validity was also confirmed based on the examination of the correlations among the constructs. Correlations between three dimensions ranged from .47 to .81, lower than the $r < .85$ determining discriminant validity criterion (Kline, 1998). Discriminant validity was also considered satisfactory by calculating the square root of the average variance extracted for each of the social capital dimensions and comparing them with correlations between that dimension and other dimensions within the social capital construct. Average variances extracted were greater than the accepted level of .50 (Fornell & Larcker, 1981), except relational capital (see Table 4.5). The rational capital's AVE of less than 0.5 indicates that, on average, more measurement error remains in the items than there is variance explained by the rational capital factor structure (Hair et al., 1995).

Table 4.4. Confirmatory Factor Analysis and Reliability Testing for Social Capital Accumulation Dimensions

Social Capital	Conceptual Definition	Scale items	<i>n</i> =499	
			Standardized factor loadings	<i>t</i> -value
Structural Capital [$\alpha = .92$]	Strength of ties	I maintain close social relationships with some members in the online brand community.	0.89	68.19
		I exchange ideas extensively with some members in the online brand community.	0.78	40.54
		I know some members in the online brand community on a personal level.	0.86	59.58
		I have frequent communications with some members in the online brand community.	0.91	79.24
Cognitive Capital [$\alpha = .87$]	Shared Vision	Members in the online brand community share the vision of helping others solve their problems with the brand products or services.	0.77	33.14
		Members in the online brand community share the same goal of learning from each other.	0.82	37.99
		Members in the online brand community share the same value that helping others is worthwhile.	0.85	42.49
	Shared Language	Members in the online brand community use common terms or jargon.	0.55	14.76
		Members in the online brand community use understandable communication patterns during discussions.	0.58	16.00
		Members in the online brand community use commonly followed ways to post messages or articles.	0.59	17.58

Relational Capital	Trust	Members in the online brand community will not take advantage of others, even when the opportunity arises.	0.55	16.02
		Members in the online brand community will always keep the promises they make to one another.	0.53	15.35
		Members in the online brand community behave in a consistent manner.	0.55	16.48
		Members in the online brand community are truthful in dealing with one another.	0.58	18.61
	Norms of reciprocity	I know other members in the online brand community will help me, so it's only fair to help other members.	0.76	34.90
		I believe members in the online brand community would help me if I need it.	0.73	30.94
	Identification	I feel a sense of belonging toward the online brand community.	0.76	35.05
		I have feelings of togetherness or closeness in the online brand community.	0.77	36.97
		I have a strong positive feeling toward the online brand community.	0.77	35.91
	Volunteerism	I am proud to be a member of the online brand community.	0.75	34.06
		I assist members from the online brand community to find solutions to their problems.	0.71	28.02
		I am willing to work together with other members to improve the online brand community experience.	0.74	32.74
		I keep up with the latest technical developments to make useful contributions to the online brand community.	0.67	24.22
Fit indices		$\chi^2 = 1027.94$ ($df = 217$) CFI=.91, RMSEA=.087, SRMR=.072		

* $p \leq .001$

Table 4.5. Correlations between Three Dimensions of Social Capital Accumulations

	Structural Capital	Cognitive Capital	Relational Capital
Structural Capital	(.74 ^a)		
Cognitive Capital	0.47***	(.50 ^a)	
Relational Capital	0.63***	.81***	(.47 ^a)

* $p \leq .001$

^a In parentheses: Square root of the average variance extracted (AVE) is calculated from observed variables (items) as $\sum \text{std. loading}_i^2$ divided by $\sum \text{std. loading}_i^2 + \sum \epsilon_j$ (Hair et al., 1995).

Knowledge Sharing

A confirmatory factor analysis was performed on the four knowledge sharing items. The knowledge sharing factor with four items showed a good model fit to the data based on *chi*-square of 4.403 [$df = 2$], $p < .001$], CFI of 1.0, the RMSEA estimate of .049, and SRMR of .007]. The standardized factor loadings and *t*-values for each item of the sharing factor were statistically significant as shown in Table 4.6. The Cronbach's *alpha* for this factor was .92.

Table 4.6. Results of Confirmatory Factor Analysis for Knowledge Sharing ($n = 499$)

Scale items	Standardized factor loading	<i>t</i> -value
I usually spend a lot of time sharing knowledge with other members in the online brand community.	.85	58.23***
I usually actively share my knowledge with other members in the online brand community.	.91	78.44***
I usually involve myself in discussions of various topics rather than specific topics in the online brand community.	.89	69.60***
I usually respond to others' comments on my messages in the online brand community.	.77	37.14***

*** $p \leq .001$

Community Commitment

As a result of the confirmatory factor analysis using four community commitment items, one community commitment item was removed from the scale due to a low factor loading below .50 (i.e., “I have psychological attachment to the members of the online brand community”). The community commitment factor with three items showed a perfect model fit to the data [$\chi^2 = 0.0$ ($df = 0$), $p < .001$]. Moreover, CFI was 1.0, and the RMSEA and SRMR were .00. Standardized factor loadings and t -values for each item of the community commitment factor were statistically significant as shown in Table 4.7. The Cronbach’s *alpha* for this factor was .88.

Table 4.7. Results of Confirmatory Factor Analysis for community commitment ($n = 499$)

Scale items	Standardized factor loading	t -value
I think exchanging opinions with other members is important in the online brand community.	.74	31.47***
I expect I will continuously participate in the online brand community’s activities.	.96	61.12***
I am an actively participating member of the online brand community.	.83	43.41***

*** $p \leq .001$

Brand Loyalty

A confirmatory factor analysis was performed on the 17 brand loyalty items. Five brand loyalty items were removed because their factor loadings were below .50. Two brand loyalty items were, “I have a negative attitude to the brand” (reverse item) and “I dislike the brand products and services.” Both measured the affective aspect of loyalty. Two items, “I nearly always find the offer of the brand inferior” (reverse item) and “I have repeatedly found the features of the brand inferior” (reverse item), measured conative loyalty. One item, “I would always continue to favor the offerings of the brand over other shoes and clothing brands,” measured action loyalty. Confirmatory factor analysis revealed that removing these items

resulted in an improvement in the fit indices ($\chi^2 = 677.782$ ($df = 54$), $p < .001$) CFI = .84, RMSEA = .15, and SRMR = .07 [see Table 4.8]. Also, modification indices that identified aspects of the model and did not fit the data well (Brown, 2006) were examined to improve the model fit to the data. These values indicate the decrease in the overall model χ^2 if a fixed or constrained parameter (i.e., factor loading) were freed (Brown, 2006). In this study, if items measured the same aspect of a conceptual definition they were correlated based on modification indices. The items to measure affective loyalty, “I like the features of the brand services and products,” and “I like the performance and services of the brand,” were correlated as well. Also, action loyalty items, “I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands,” “I will always continue to choose the features of the brand over other clothing, shoe and accessory brands,” and “I will always choose to use the brand in preference to competitor clothing, shoe and accessory brands” were correlated with each other. Finally, the brand loyalty factor with 12 items showed a good model fit to the data based on a *chi-square* of 187.176 [$df = 50$], $p < .001$], CFI of .97, the RMSEA estimate of .074, and SRMR of .031. The Cronbach’s *alpha* for this factor was .94.

Table 4.8. Fit Indices for Brand Loyalty

Models	χ^2	df	CFI	RMSEA	SRMR
Full model with 17 items	2099.198	119	0.659	0.183	0.121
Improved model with 12 items	677.781	54	0.854	0.152	0.058
Improved model with 12 items and modification indices	187.176	50	0.968	0.074	0.031

Table 4.9. Results of Confirmatory Factor Analysis of Brand Loyalty ($n = 499$)

Conceptual Definition	Scale items	Standardized Factor Loading	<i>t</i> -value
Cognitive Loyalty	I believe that using the brand is preferable to other competing brands.	.84	58.36***
	I believe that the brand has the best offers at the moment.	.74	32.84***
	I believe that the features of the brand are well suited to what I like.	.81	45.96***
	I prefer the service of the brand to the service and products of other competing brands.	.77	38.74***
Affective Loyalty	I like the features of the brand services and products.	.59	18.88***
	I like the performance and services of the brand.	.65	23.25***
Conative Loyalty	I have repeatedly found the brand is better than other clothing, shoe and accessory brands.	.84	54.83***
	Repeatedly, the performance of the brand is superior to that of other clothing, shoe and accessory brands.	.77	37.39***
Action Loyalty	I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands.	.73	32.60***
	I will always continue to choose the features of the brand over other clothing, shoe and accessory brands.	.75	35.26***
	I will always choose to use the brand in preference to competitor clothing, shoe and accessory brands.	.66	24.66***
	I will always be willing to try new products offered by the brand.	.69	27.30***

*** $p \leq .001$

Hypothesized Model

A structural equation modeling analysis was conducted with a maximum-likelihood estimation procedure using Mplus 7.0 to test Hypotheses 3 through 11. As a preliminary step in the analysis of a structural equation model, correlations and the measurements between each latent variable were tested to assess the validity of the indicators. The confirmatory factor analysis procedure was used to test whether the measurement model operated adequately.

Correlations between the Variables

In this section correlations between variables are examined (see Table 4.10). Although most of the correlations between variables are moderately correlated with each other, there are exceptions. Information seeking had a moderately high correlation with convenience seeking (.67), cognitive capital (.56), and brand loyalty (.60). Socialization was more highly correlated with structural capital (.78) than all other variables. Structural capital also highly correlated with knowledge sharing (.68). Cognitive capital was highly correlated with relational capital (.81) and community commitment (.72). Relational capital was highly correlated with knowledge sharing (.78) and community commitment (.82). Knowledge sharing was highly correlated with community commitment (.79).

Table 4.10. Correlations Between the Variables

Construct	1	2	3	4	5	6	7	8	9	10	11
1. Socialization	1										
2. Entertainment Seeking	.57***	1									
3. Self-status Seeking	.59***	.23***	1								
4. Information Seeking	.22***	.43***	-.12*	1							
5. Convenience Seeking	.08	.35***	-.10	.67***	1						
6. Structural Capital	.78***	.43***	.59***	.19***	.08	1					
7. Cognitive Capital	.48***	.40***	.14**	.56***	.38***	.46***	1				
8. Relational Capital	.62***	.48***	.29***	.49***	.39***	.63***	.81***	1			
9. Knowledge Sharing	.61***	.37***	.30***	.36***	.26***	.68***	.62***	.78***	1		
10. Community Commitment	.55***	.37***	.20***	.44***	.34***	.55***	.72***	.82***	.79***	1	
11. Brand Loyalty	.09	.26***	-.16**	.60***	.48***	.08	.47***	.45***	.29***	.44***	1

Note: significant; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

The Measurement Model

A measurement model, including 63 indicators and 11 latent variables, was tested to evaluate the quality of measures prior to testing the hypothesized model. The measurement model fit was examined using confirmatory factor analysis and the maximum-likelihood estimation procedure. One item to measure the trust dimension of the relational capital construct (i.e., “Members in the online brand community will always keep the promises they make to one another”) was dropped based on modification indices to increase the model fit. The χ^2 goodness-of-fit statistic for the best fit model was significant, $\chi^2 = 4214.17$, $df = 1822$, $p < .001$, indicating rejection of the perfect fit to the model. However, the *chi-squared* fit index has limitations in determining the extent to which the model does not fit (Byrne, 1998). Also, the model was considered to be a fair fit based on the cut-off values (CFI = .90, RMSEA = .051, SRMR = .064) as used for factor structure analysis (Browne & Cudeck, 1992; Hair et al., 2006). The results implied that the 11 construct scales reflected the hypothesized dimensionality with valid measures. The confirmatory factor analysis loading of each item with its intended dimension was examined to assess convergent validity. As presented in Table 4.11, all standardized factor loadings were higher than .50 (exceeding the suggested cut-off of .50, Nunnally & Bernstein, 1994) with highly significant *t*-values ranging from 14.77 to 84.79.

Discriminant validity was also confirmed based on the examination of the correlations among the constructs. Correlations among variables were below Kline’s (1998) criterion of $r < .85$ to determine discriminant validity.

The construct reliabilities and average variance extracted shown in Table 4.11 indicated that the measurement model had the scale dimensionality and validity of the

measurement model. Internal consistency was supported using Cronbach's standardized *alpha* (Table 4.11). Construct reliabilities were confirmed with Cronbach's *alpha* coefficients over .70 of all measures. Average variances extracted were also mathematically assessed to test whether variances in the indicators accounted for the latent construct. All 11 variances, except information seeking and relational capital, exceeded the acceptable level of .50, which is beyond the threshold level suggested by Fornell & Larcker (1981).

Table 4.11. Results of Measurement Model with 11 Latent Variables and 63 Indicators

Variable	Item	Std. factor Loading	<i>t</i> -value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Socialization				.84	.59	.85
	I visit the online brand community to receive peer support from other consumers.	0.61	19.84			
	I visit the online brand community to meet interesting people.	0.85	51.06			
	I visit the online brand community to feel like I belong to a community.	0.81	41.66			
	I visit the online brand community to stay in touch with other consumers I know.	0.77	36.20			
Entertainment seeking				.90	.59	.89
	I visit the online brand community because it is fun.	0.82	45.88			
	I visit the online brand community because it is exciting.	0.89	67.98			
	I visit the online brand community because it is enjoyable.	0.82	45.21			
	I visit the online brand community to relax.	0.74	31.36			
	I visit the online brand community to pass the time when I have nothing else to do.	0.54	15.61			
	I visit the online brand community to be entertained.	0.75	33.48			
Self-status seeking				.84	.55	.83
	I visit the online brand community because I feel peer pressure to participate.	0.70	24.28			
	I visit the online brand community because it makes me look cool to others.	0.75	29.57			
	I visit the online brand community to enhance my career through community participation.	0.87	42.96			
	I visit the online brand community to gain insight about myself.	0.64	20.69			

Table 4.11. (Continued)

Variable	Item	Std. factor Loading	t-value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Information seeking				.81	.49	.70
	I visit the online brand community to receive information about products and services of the brand the community endorses.	0.77	33.25			
	I visit the online brand community to learn about the brand events the community endorses.	0.53	14.77			
	I visit the online brand community because it is a positive experience for me.	0.70	24.86			
	I visit the online brand community to make decisions about my purchases.	0.78	34.48			
	I visit the brand community to seek sales and promotion information about products and services of the brand the community endorses.	0.66	22.63			
Convenience seeking				.83	.63	.84
	I visit the online brand community because I can obtain the brand products, service and event information for less effort.	0.69	24.64			
	I visit the online brand community because I can use it anytime, anywhere.	0.83	41.24			
	I visit the online brand community because it is convenient to use.	0.86	44.64			
Structural capital				.92	.74	.92
	I maintain close social relationships with some members in the online brand community.	0.88	71.46			
	I exchange ideas extensively with some members in the online brand community.	0.79	42.40			
	I know some members in the online brand community on a personal level.	0.85	58.90			
	I have frequent communications with some members in the online brand community.	0.91	84.79			

Table 4.11. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> -value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Cognitive capital				.87	.50	.85
	Members in the online brand community share the vision of helping others solve their problems with the brand products or services.	0.76	30.78			
	Members in the online brand community share the same goal of learning from each other.	0.81	36.51			
	Members in the online brand community share the same value that helping others is worthwhile.	0.83	38.18			
	Members in the online brand community use common terms or jargon.	0.57	15.65			
	Members in the online brand community use understandable communication patterns during discussions.	0.59	16.86			
	Members in the online brand community use commonly followed ways to post messages or articles.	0.61	18.58			
Relational capital				.92	.49	.92
	Members in the online brand community will not take advantage of others, even when the opportunity arises.	0.53	15.22			
	Members in the online brand community behave in a consistent manner.	0.53	15.46			
	Members in the online brand community are truthful in dealing with one another.	0.53	15.66			
	I know other members in the online brand community will help me, so it's only fair to help other members.	0.75	33.95			
	I believe members in the online brand community would help me if I need it.	0.71	29.24			
	I feel a sense of belonging toward the online brand community.	0.76	35.18			
	I have feelings of togetherness or closeness in the online brand community.	0.76	35.27			

Table 4.11. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> -value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Relational capital (Continued)	I have a strong positive feeling toward the online brand community.	0.76	35.73			
	I am proud to be a member of the online brand community.	0.77	36.39			
	I assist members from the online brand community to find solutions to their problems.	0.74	32.55			
	I am willing to work together with other members to improve the online brand community experience.	0.77	36.95			
	I keep up with the latest technical developments to make useful contributions to the online brand community.	0.68	25.80			
Knowledge sharing				.92	.73	.92
	I usually spend a lot of time sharing knowledge with other members in the online brand community.	0.86	62.76			
	I usually actively share my knowledge with other members in the online brand community.	0.90	82.61			
	I usually involve myself in discussions of various topics rather than specific topics in the online brand community.	0.88	69.82			
	I usually respond to others' comments on my messages in the online brand community.	0.78	40.19			
Community commitment				.88	.72	.88
	I think exchanging opinions with other members is important in the online brand community.	0.77	36.83			
	I expect I will continuously participate in the online brand community's activities.	0.90	71.22			
	I am an actively participating member of the online brand community.	0.87	60.18			

Table 4.11. (Continued)

Variable	Item	Std. factor Loading	t-value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Brand loyalty				.94	.55	.94
	I believe that using the brand is preferable to other competing brands.	0.85	60.21			
	I believe that the brand has the best offers at the moment.	0.74	33.05			
	I believe that the features of the brand are well suited to what I like.	0.82	48.07			
	I prefer the service of the brand to the service and products of other competing brands.	0.77	38.76			
	I like the features of the brand services and products.	0.59	19.44			
	I like the performance and services of the brand.	0.65	23.52			
	I have repeatedly found the brand is better than other clothing, shoe and accessory brands.	0.83	53.79			
	Repeatedly, the performance of the brand is superior to that of other clothing, shoe and accessory brands.	0.76	36.40			
	I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands.	0.73	32.36			
	I will always continue to choose the features of the brand over other clothing, shoe and accessory brands.	0.75	34.88			
	I will always choose to use the brand in preference to competitor clothing, shoe and accessory brands.	0.66	24.23			
	I will always be willing to try new products offered by the brand.	0.69	27.52			

^aConstruct reliability is calculated as $(\sum \text{std. loading})^2$ divided by $(\sum \text{std. loading})^2 + \sum \epsilon_j$. Measurement error is 1.0 minus the reliability of the indicator, which is the square of the indicator's standardized loading (Hair, Anderson, Tathan, & Black, 1995).

^bThe variance extracted measure is calculated as $\sum \text{std. loading}^2$ divided by $\sum \text{std. loading}^2 + \sum \epsilon_j$ (Hair et al., 1995)

The Latent Model

Figure 4.1 shows the variables used in hypotheses testing and the visual summary of hypotheses testing results. Hypotheses 4 through 11 of the proposed model (see Figure 2.4 in Chapter 2) were tested by the maximum likelihood estimation procedure using Mplus v7. The hypothesized model consisted of five exogenous variables (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) and six endogenous variables (structural capital, cognitive capital, relational capital, knowledge sharing, community commitment, brand loyalty). Each latent construct was represented by multiple items in the observed constructs. Results revealed acceptable model fit to the data with a *chi*-square of 3916.06 ($df=1758$, $p<.001$), CFI of .91, RMSEA of .050, and SRMR of .073. Ten structural paths out of 36 paths in the structural model were statistically significant (see Table 4.12 and 4.13).

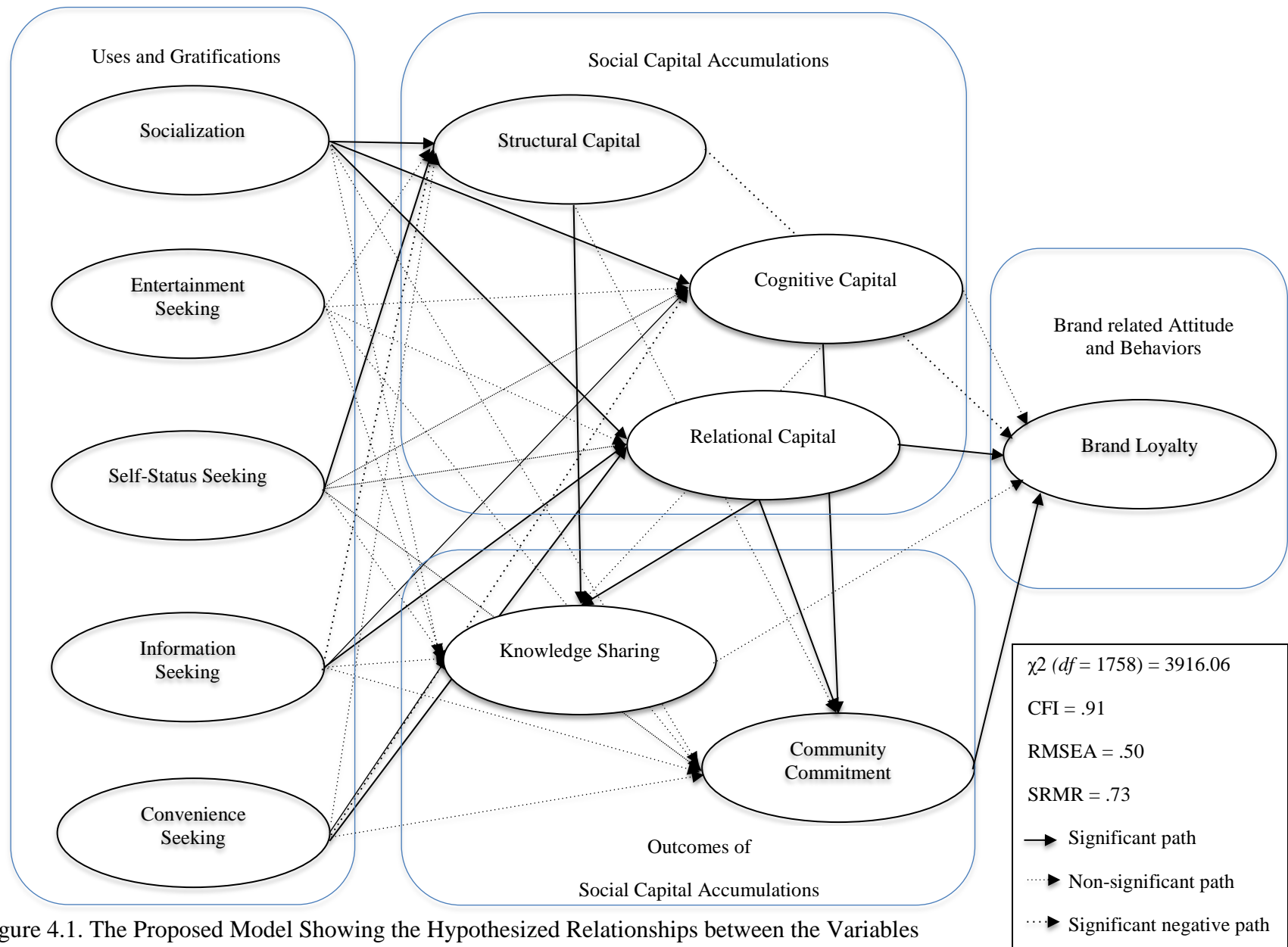


Figure 4.1. The Proposed Model Showing the Hypothesized Relationships between the Variables

Table 4.12. Standardized Path Coefficients and Fit Statistics for the Proposed Model

		Hypothesis		Direction of effect	Standardized path coefficient	<i>t</i> -value	<i>p</i> -value
H3a	Structural capital	→	Knowledge sharing	+	.33	4.86	.000
H3b	Cognitive capital	→	Knowledge sharing	n.s	-.04	-.83	.409
H3c	Relational capital	→	Knowledge sharing	+	.61	8.92	.000
H4a	Structural capital	→	Community commitment	n.s	.10	1.39	.163
H4b	Cognitive capital	→	Community commitment	+	.11	2.01	.045
H4c	Relational capital	→	Community commitment	+	.64	9.26	.000
H5a	Socialization	→	Structural capital	+	.70	11.70	.000
H5b	Entertainment seeking	→	Structural capital	n.s	-.04	-2.56	.460
H5c	Self-status seeking	→	Structural capital	+	.19	3.59	.000
H5d	Information seeking	→	Structural capital	n.s	.04	.68	.495
H5e	Convenience seeking	→	Structural capital	n.s	.04	.75	.451
H6a	Socialization	→	Cognitive capital	+	.43	5.79	.000
H6b	Entertainment seeking	→	Cognitive capital	n.s	-.05	-.82	.415
H6c	Self-status seeking	→	Cognitive capital	n.s	-.05	-.85	.397
H6d	Information seeking	→	Cognitive capital	+	.33	5.26	.000
H6e	Convenience seeking	→	Cognitive capital	n.s	.09	1.57	.117
H7a	Socialization	→	Relational capital	+	.54	8.11	.000
H7b	Entertainment seeking	→	Relational capital	n.s	-.01	-.08	.937
H7c	Self-status seeking	→	Relational capital	n.s	.003	.05	.959
H7d	Information seeking	→	Relational capital	+	.24	4.13	.000
H7e	Convenience seeking	→	Relational capital	+	.22	4.14	.000
H8a	Socialization	→	Knowledge sharing	n.s	.12	1.48	.139
H8b	Entertainment seeking	→	Knowledge sharing	n.s	-.09	-1.80	.072
H8c	Self-status seeking	→	Knowledge sharing	-	-.11	-2.19	.029
H8d	Information seeking	→	Knowledge sharing	n.s	-.03	-.55	.585
H8e	Convenience seeking	→	Knowledge sharing	n.s	.04	.81	.419
H9a	Socialization	→	Community commitment	n.s	.14	1.79	.073
H9b	Entertainment seeking	→	Community commitment	n.s	-.10	-1.92	.055
H9c	Self-status seeking	→	Community commitment	-	-.12	-2.30	.021
H9d	Information seeking	→	Community commitment	n.s	.01	.11	.911

Table 4.12. (Continued)

	Hypothesis			Direction of effect	Standardized path coefficient	<i>t</i> -value	<i>p</i> -value
H9e	Convenience seeking	→	Community commitment	n.s	.07	1.42	.157
H10a	Structural capital	→	Brand loyalty	-	-.38	-5.88	.000
H10b	Cognitive capital	→	Brand loyalty	n.s	.06	1.81	.417
H10c	Relational capital	→	Brand loyalty	+	.55	4.66	.000
H11a	Knowledge sharing	→	Brand loyalty	n.s	-.15	-1.46	.144
H11b	Community commitment	→	Brand loyalty	+	.29	2.83	.005

Note: +: Significant positive effect
 - : Significant negative effect
 n.s: Non-significant effect

Tests of Hypotheses 3 to 11

Hypotheses 3 through 4 predicted that social capital accumulations (structural, cognitive, and relational capital) positively influenced the outcomes of social capital accumulations (knowledge sharing, community commitment). The H3 series posited that (H3a) structural capital, (H3b) cognitive capital, and (H3c) relational capital influenced knowledge sharing. As expected, structural capital and relational capital predicted knowledge sharing. The standardized path coefficient between structural capital and knowledge sharing was .33 ($t = 4.86, p \leq .001$), providing support for Hypothesis 8a. The standardized path coefficient between relational capital and knowledge sharing was .61 ($t = 8.92, p \leq .001$), providing support for Hypothesis 3c. However, the standardized path coefficient between cognitive capital and knowledge sharing was only -.04 ($t = -.83, p = 0.41$), leading to rejection of Hypothesis 3b.

The H4 series posited that (H4a) structural capital, (H4b) cognitive capital, and (H4c) relational capital influence community commitment. The standardized path coefficient between structural capital and community commitment was .10 ($t = 1.39, p = .16$), leading to the rejection of Hypothesis 4a. As expected, cognitive and relational capital predicted community

commitment. The standardized path coefficient between cognitive capital and community commitment was .11 ($t = 2.01, p \leq .05$), providing support for Hypothesis 4b. The standardized path coefficient between relational capital and community commitment was .64 ($t = 9.26, p \leq .001$), providing support for Hypothesis 4c.

Hypotheses 5 through 7 predicted that consumers' needs to use an online brand community (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) positively influence social capital accumulations (structural, cognitive, and relational capital). The H5 series posited that (H5a) socialization, (H5b) entertainment seeking, (H5c) self-status seeking, (H5d) information seeking, and (H5e) convenience seeking influence structural capital. The standardized path coefficient (β) between (H5a) socialization and structural capital was .70 ($t = 11.70, p \leq .001$), providing support for Hypothesis 5a. The standardized path coefficient (β) between (H5c) self-status seeking and structural capital was .19 ($t = 3.59, p \leq .001$), providing support for Hypothesis 3c. There are no significant paths among entertainment seeking ($\beta = -.04, t = -2.56, p = .46$), information seeking ($\beta = .04, t = .68, p = .50$), and convenience seeking ($\beta = .04, t = .75, p = .45$) with structural capital. Therefore, Hypotheses 5b, 5d and 5e were not supported.

The H6 series posited that (H6a) socialization, (H6b) entertainment seeking, (H6c) self-status seeking, (H6d) information seeking, and (H6e) convenience seeking influence cognitive capital. Results showed that the standardized path coefficients (β) for socialization ($\beta = .43, t = 5.79, p \leq .001$) and information seeking ($\beta = .33, t = 5.26, p \leq .001$) to cognitive capital are significant, leading support for Hypotheses 6a and 6d. There are no significant paths among entertainment seeking ($\beta = -.05, t = -.82, p = .42$), self-status seeking ($\beta = -.05, t = -.85, p = .40$),

and convenience seeking ($\beta = .09$ $t = 1.57$, $p = .12$) on cognitive capital. Therefore, Hypotheses 6b, 6d and 6e were not supported.

The H7 series posited that (H7a) socialization, (H7b) entertainment seeking, (H7c) self-status seeking, (H7d) information seeking, and (H7e) convenience seeking influence relational capital. Results showed that the standardized path coefficients for socialization ($\beta = .54$, $t = 8.11$, $p \leq .001$), information seeking ($\beta = .24$, $t = 4.13$, $p \leq .001$), convenience seeking ($\beta = .22$, $t = 4.14$, $p \leq .001$) and cognitive capital are significant, lending support for Hypotheses 7a, 7d, and 7e. There are no significant paths from entertainment seeking ($\beta = -.01$, $t = -.08$, $p = .94$) and self-status seeking ($\beta = .003$, $t = .05$, $p = .959$) to relational capital. Therefore, Hypotheses 7b and 7c were not supported.

Hypotheses 8 through 9 predicted that consumers' needs to use an online brand community (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) positively influence the outcomes of social capital accumulations (knowledge sharing, community commitment). The H8 series posited that (H8a) socialization, (H8b) entertainment seeking, (H8c) self-status seeking, (H8d) information seeking, and (H8e) convenience seeking influence knowledge sharing. All paths related to Hypotheses 8a through 8e were insignificant except for H8c. However, the standardized path coefficients from self-status seeking to knowledge sharing indicated significant negative paths ($\beta = -.11$ $t = -2.19$, $p = .03$), although the correlation between self-status seeking and knowledge sharing was positive (.30). The reason could be collinearity between the model's variables, affecting the calculated path coefficient of entertainment seeking and self-status seeking (Hair et al., 2006). Therefore, Hypotheses 8a through 8e were not supported.

The H9 series posited that (H9a) socialization, (H9b) entertainment seeking, (H9c) self-status seeking, (H9d) information seeking, and (H9e) convenience seeking influence community commitment. All paths related to Hypotheses 9a through 9e were insignificant except for H9c. However, the standardized path coefficients for self-status seeking to community commitment indicated significant negative paths ($\beta = -.12$ $t = -2.30$, $p = .02$), although the correlation between self-status seeking and knowledge sharing was positive (.20). The reason could be collinearity among the model's variables, affecting the calculated path coefficient of self-status seeking (Hair et al., 2006). Therefore, Hypotheses 9a through 9e were not supported.

Hypotheses 10 through 11 predicted that social capital accumulations (structural, cognitive, and relational capital) and outcomes of social capital accumulations (knowledge sharing, community commitment) positively influence brand loyalty. The H10 series posited that (H10a) structural capital, (H10b) cognitive capital, and (H10c) relational capital influence brand loyalty. As expected, relational capital predicted brand loyalty. The standardized path coefficient between relational capital and brand loyalty was .55 ($t = 4.66$, $p \leq .001$), providing support for Hypothesis 10c. However, the standardized path coefficients for structural capital to brand loyalty indicated significant negative paths ($\beta = -.38$ $t = -5.88$, $p \leq .001$). The reason could be collinearity between the model's variables, affecting the calculated path coefficient of structural capital (Hair et al., 2006). The standardized path coefficient between cognitive capital and brand loyalty was .06 ($t = 1.81$, $p = .42$). Therefore, Hypotheses 10a and 10b were rejected.

The H11 series posited that (H11a) knowledge sharing and (H11b) community commitment influence brand loyalty. Hypothesis 11a posited that knowledge sharing influences brand loyalty, but there were no significant paths between knowledge sharing and brand loyalty ($\beta = -.15$, $t = -1.46$, $p = .14$), and did not support Hypothesis 11a. As expected, community

commitment predicted brand loyalty. Hypothesis 11b posited that community commitment positively influences brand loyalty. The standardized path coefficient between community commitment and brand loyalty was .29 ($t = 2.83, p \leq .01$), providing support for Hypothesis 11b.

The Fully Recursive Model

The fully recursive model, a path model in which all causal relationships flow in one direction with no reciprocal effects of feedback loops (Byrne, 1998), was specified to illustrate all possible relationships among the exogenous and endogenous variables to explain the association among the variables. Consequently, comparing the proposed model with the fully recursive model evaluated whether the proposed model accounts for the association among variables.

The model fit indices of the fully recursive model revealed a *chi*-square of 3826.905 ($df = 1753$) at $p < 0.001$, CFI = 0.91, RMSEA = 0.05 and SRMR = 0.07. The fully recursive model was compared with the proposed model to see if there are unidentified causal relationships in the proposed model. Table 4.12 summarizes all possible relationships in test results of the fully recursive model compared with the proposed model test results. Most of associations of between variables of the proposed model were the same as those of the fully recursive model, except relationships between brand loyalty and exogenous variables.

In the proposed model, the standardized path coefficients for structural capital to brand loyalty indicated significant negative paths ($\beta = -.38, t = -5.88, p \leq .001$), but in the fully recursive model, there was no significant relationship between structural capital to brand loyalty. However, new significant relationships were found in the fully recursive model: the standardized path coefficients for information ($\beta = .34, t = 5.57, p \leq .001$) and convenience ($\beta = .12, t = 2.15, p \leq .05$) seeking to brand loyalty.

Table 4.13. Comparison between Standardized Path Coefficients of the Proposed Model and Standardized Path Coefficients of the Fully Recursive Model

Predictor Variables	Outcome Variables											
	Structural capital		Cognitive capital		Relational capital		Knowledge sharing		Community commitment		Brand loyalty	
	Proposed model	Fully recursive model	Proposed model	Fully recursive model	Proposed model	Fully recursive model	Proposed model	Fully recursive model	Proposed model	Fully recursive model	Proposed model	Fully recursive model
Socialization	.7***	.69***	.43***	.44***	.54***	.55***	.12	.11	.14	.15	–	-.10
Entertainment seeking	-.04	-.04	-.05	-.05	-.01	-.003	-.09	-.09	-.10	-.10	–	-.01
Self-status seeking	.19***	.18***	-.05	-.05	.003	.01	-.11*	-.11*	-.12*	-.12*	–	-.10
Information seeking	.04	.05	.33***	.33***	.24***	.22***	-.03	-.01	.01	.004	–	.34***
Convenience seeking	.04	.04	.09	.09	.22***	.21***	.04	.04	.07	.07	–	.12*
Structural capital	–	–	–	–	–	–	.33***	.34***	.10	.10	-.38***	-.10
Cognitive capital	–	–	–	–	–	–	-.04	-.05	.11*	.11*	.06	-.01
Relational capital	–	–	–	–	–	–	.61***	.60***	.64***	.65***	.55***	.32**
Knowledge sharing	–	–	–	–	–	–	–	–	–	–	-.15	-.13
Community commitment	–	–	–	–	–	–	–	–	–	–	.29**	.24**
R2	36%	36%	65%	65%	47%	48%	30%	30%	30%	30%	65%	54%

Note: significant; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Alternate Model

To examine whether a more parsimonious explanation of the proposed model (see Figure 1) can be obtained, an alternate model with a second order factor analysis of social capital accumulations was tested. In the alternate model, three dimensions of social capital accumulations (structural, cognitive, and relational capital) are the first-order factors, which are indicators of the second-order factor of social capital accumulation. A structural equation modeling analysis was conducted with a maximum-likelihood estimation procedure using Mplus 7.0. As a preliminary step in the analysis of the alternate model, the second order factor analysis of social capital accumulation was conducted. Then, the confirmatory factor analysis procedure was used to test whether the measurement model of the alternate model operated adequately. Finally, the alternate model was tested.

Second Order Factor Analysis Model of Social Capital

A second order factor analysis model, including one second order factor (social capital accumulation) based on three first-order factors (structural, cognitive, and relational social capital) with 23 indicators, was tested to evaluate the quality of the second order of the social capital instrument prior to testing the alternate model.

As a result of the model, loadings of 17 items with intended first-order factors, ranging from .50 to .92, exceeded the suggested cut-off of .50 (Nunnally & Bernstein, 1994) (see Table 4.14) and six items needed to be removed from the scale due to a low factor loading below .50 and based on modification indices (i.e., “Members in the online brand community use common terms or jargon,” “Members in the online brand community will not take advantage of others, even when the opportunity arises,” “Members in the online brand community will always keep the promises they make to one another,” “Members in the online brand community behave in a

consistent manner,” “Members in the online brand community are truthful in dealing with one another,” “I keep up with the latest technical developments to make useful contributions to the online brand community.”). Three first-order factors were loaded above .50 (see Figure 4.2). The final second order factor analysis model indicated that the one dimension scale of social capital based on three factors had a good model fit: $\chi^2 = 398.84$ ($df = 111$) CFI=.96, RMSEA=.072, SRMR=.063 (see Figure 4.2). Based on the fit indices, no further modifications were necessary, and convergent validity of the measure of social capital accumulations using an online brand community was confirmed with the CFA loading of each factor ranging from .62 to .91 on the second factor (Nunnally & Bernstein, 1994) and statistically significant t -values ($p < .001$). Therefore, the second-order factor structure of social capital was supported to be included in the alternate model.

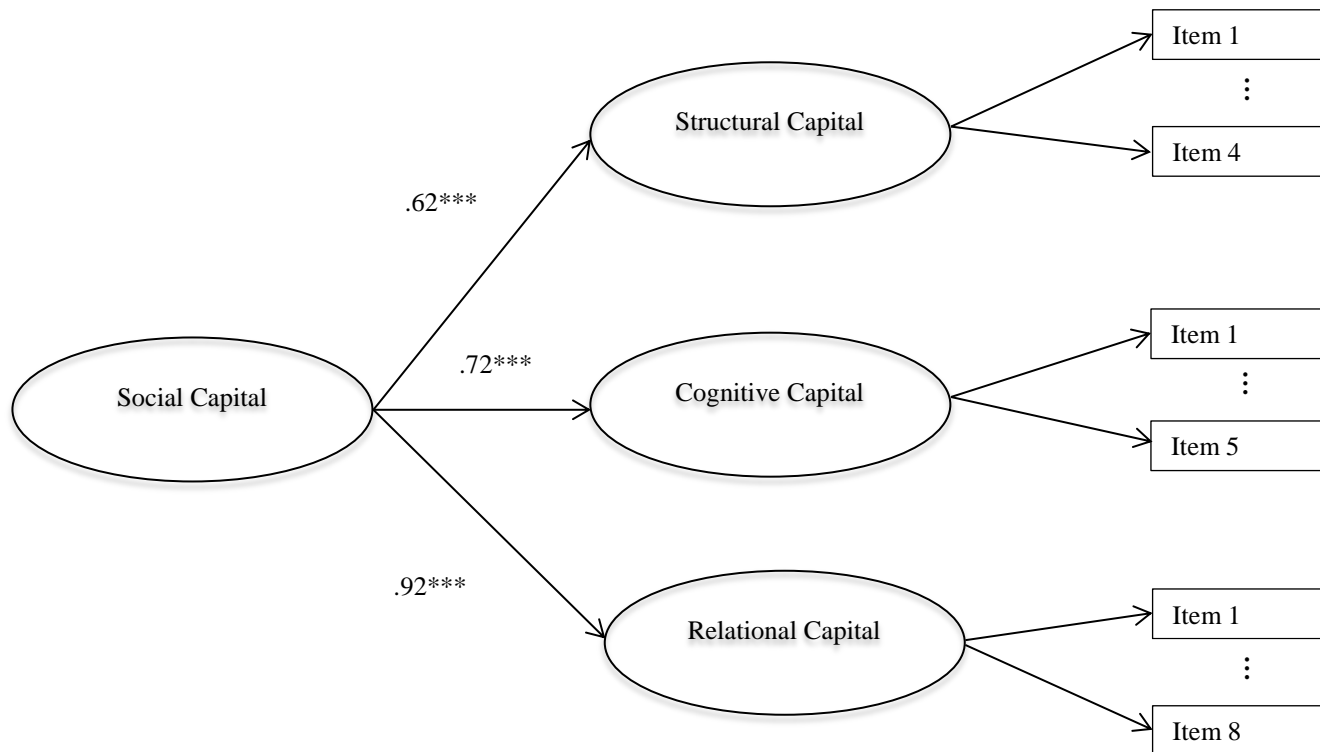
Table 4.14. First-order Standardized Factor Loadings of Social Capital Scale Items

Social Capital	Scale items	<i>n</i> = 499	
		Standardized factor loadings	<i>t</i> -value
Structural Capital	I maintain close social relationships with some members in the online brand community.	0.88	68.47
	I exchange ideas extensively with some members in the online brand community.	0.78	40.54
	I know some members in the online brand community on a personal level.	0.86	59.38
	I have frequent communications with some members in the online brand community.	0.91	81.01
Cognitive Capital	Members in the online brand community share the vision of helping others solve their problems with the brand products or services.	0.76	35.26
	Members in the online brand community share the same goal of learning from each other.	0.90	73.58
	Members in the online brand community share the same value that helping others is worthwhile.	0.92	84.53

Table 4.14. (Continued)

Social Capital	Scale items	<i>n</i> = 499	
		Standardized factor loadings	<i>t</i> -value
Cognitive Capital (Continued)	Members in the online brand community use understandable communication patterns during discussions.	0.50	13.90
	Members in the online brand community use commonly followed ways to post messages or articles.	0.53	15.50
Relational Capital	I know other members in the online brand community will help me, so it's only fair to help other members.	0.73	28.48
	I believe members in the online brand community would help me if I need it.	0.71	24.41
	I feel a sense of belonging toward the online brand community.	0.80	40.02
	I have feelings of togetherness or closeness in the online brand community.	0.80	39.16
	I have a strong positive feeling toward the online brand community.	0.80	39.72
	I am proud to be a member of the online brand community.	0.78	36.89
	I assist members from the online brand community to find solutions to their problems.	0.68	25.09
	I am willing to work together with other members to improve the online brand community experience.	0.71	28.10

* $p \leq .001$



$\chi^2 (df = 111) = 398.84$
CFI = .96
RMSEA = .07
SRMR = .06

Figure 4.2. The Second-order Factor Analysis of Social Capital Measure

* $p \leq .001$

The Measurement Model

A measurement model, including 55 indicators, 8 latent variables and 1 second-order latent variable by 3 first-order latent variables, was tested to evaluate the quality of measures prior to testing the alternate model. The measurement model fit was examined using confirmatory factor analysis and the maximum-likelihood estimation procedure. Two items to measure cognitive capital construct (i.e., “Members in the online brand community use understandable communication patterns during discussions,” and “Members in the online brand community use commonly followed ways to post messages or articles”) were dropped based on modification indices to increase the model fit. The χ^2 goodness-of-fit statistic for the best fit model was significant, $\chi^2 = 3354.34$, $df = 1435$, $p < .001$, indicating rejection of the perfect fit to the model. However, the *chi-squared* fit index has limitations in determining the extent to which the model does not fit (Byrne, 1998). Also, the model was considered to be a fair fit based on the cut-off values (CFI = .91, RMSEA = .052, SRMR = .073) as used for factor structure analysis (Browne & Cudeck, 1992; Hair et al., 2006). The results implied that the 9 construct scales reflected the hypothesized dimensionality with valid measures. The confirmatory factor analysis loading of each item with its intended dimension was examined to assess convergent validity. As presented in Table 4.15, all standardized factor loadings were higher than .50 (exceeding the suggested cut-off of .50, Nunnally & Bernstein, 1994) with highly significant *t*-values ranging from 13.68 to 84.16.

Discriminant validity was also supported based on the correlations among the constructs (Table 4.16). Although most of the correlations between variables were below

Kline's (1998) criterion of $r < .85$ to determine discriminant validity, there are exceptions. Knowledge sharing highly correlated with community commitment (.87)

The construct reliabilities and average variance extracted shown in Table 4.15 indicated that the measurement model had the scale dimensionality and validity of the measurement model. Internal consistency was assessed using Cronbach's standardized *alpha* (Table 4.15). Also, Cronbach's *alpha* coefficients over .70 of all measures confirmed construct reliabilities that examine the degree to which the indicators of each latent construct were consistent in measuring underlying factors (Fornell & Larcker, 1981; Hair et al., 1995). Average variances extracted were also mathematically assessed to test whether variances in the indicators accounted for the latent construct. All variances, except information seeking, exceeded the acceptable level of .50, which is beyond the threshold level suggested by Fornell & Larcker (1981).

Table 4.15. Results of Measurement Model with 9 Latent Variables and 55 Indicators

Variable	Item	Std. factor Loading	<i>t</i> - value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Socialization				.84	.59	.85
	I visit the online brand community to receive peer support from other consumers.	0.62	20.52			
	I visit the online brand community to meet interesting people.	0.84	48.48			
	I visit the online brand community to feel like I belong to a community.	0.82	43.47			
	I visit the online brand community to stay in touch with other consumers I know.	0.76	34.75			
Entertainment seeking				.90	.59	.89
	I visit the online brand community because it is fun.	0.82	45.84			
	I visit the online brand community because it is exciting.	0.89	68.06			
	I visit the online brand community because it is enjoyable.	0.82	45.15			
	I visit the online brand community to relax.	0.74	31.40			
	I visit the online brand community to pass the time when I have nothing else to do.	0.54	15.60			
	I visit the online brand community to be entertained.	0.75	33.54			
Self-status seeking				.84	.55	.83
	I visit the online brand community because I feel peer pressure to participate.	0.70	24.08			
	I visit the online brand community because it makes me look cool to others.	0.76	30.15			
	I visit the online brand community to enhance my career through community participation.	0.86	41.09			
	I visit the online brand community to gain insight about myself.	0.65	21.05			

Table 4.15. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> - value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Information seeking				.81	.49	.70
	I visit the online brand community to receive information about products and services of the brand the community endorses.	0.77	33.21			
	I visit the online brand community to learn about the brand events the community endorses.	0.54	14.92			
	I visit the online brand community because it is a positive experience for me.	0.70	24.72			
	I visit the online brand community to make decisions about my purchases.	0.78	34.29			
	I visit the brand community to seek sales and promotion information about products and services of the brand the community endorses.	0.67	22.59			
Convenience seeking				.83	.72	.92
	I visit the online brand community because I can obtain the brand products, service and event information for less effort.	0.69	24.64			
	I visit the online brand community because I can use it anytime, anywhere.	0.83	41.10			
	I visit the online brand community because it is convenient to use.	0.86	44.62			
Social capital	Structural capital			.92	.74	.92
	I maintain close social relationships with some members in the online brand community.	0.88	67.30			
	I exchange ideas extensively with some members in the online brand community.	0.79	42.01			
	I know some members in the online brand community on a personal level.	0.85	58.03			
	I have frequent communications with some members in the online brand community.	0.91	84.20			

Table 4.15. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> - value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Social capital (continued)	Cognitive capital			.87	.50	.85
	Members in the online brand community share the vision of helping others solve their problems with the brand products or services.	0.76	35.62			
	Members in the online brand community share the same goal of learning from each other.	0.90	73.48			
	Members in the online brand community share the same value that helping others is worthwhile.	0.92	84.16			
	Relational capital			.92	.50	.92
	I know other members in the online brand community will help me, so it's only fair to help other members.	0.71	28.43			
	I believe members in the online brand community would help me if I need it.	0.68	25.51			
	I feel a sense of belonging toward the online brand community.	0.80	40.23			
	I have feelings of togetherness or closeness in the online brand community.	0.79	39.21			
	I have a strong positive feeling toward the online brand community.	0.79	39.26			
	I am proud to be a member of the online brand community.	0.80	40.36			
	I assist members from the online brand community to find solutions to their problems.	0.70	27.20			
	I am willing to work together with other members to improve the online brand community experience.	0.73	30.78			

Table 4.15. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> - value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
Knowledge sharing				.92	.73	.92
	I usually spend a lot of time sharing knowledge with other members in the online brand community.	0.86	61.97			
	I usually actively share my knowledge with other members in the online brand community.	0.90	83.38			
	I usually involve myself in discussions of various topics rather than specific topics in the online brand community.	0.88	69.27			
	I usually respond to others' comments on my messages in the online brand community.	0.78	49.95			
Community commitment				.88	.72	.88
	I think exchanging opinions with other members is important in the online brand community.	0.77	36.13			
	I expect I will continuously participate in the online brand community's activities.	0.90	71.38			
	I am an actively participating member of the online brand community.	0.87	60.40			
Brand loyalty				.94	.55	.94
	I believe that using the brand is preferable to other competing brands.	0.85	60.04			
	I believe that the brand has the best offers at the moment.	0.74	33.02			
	I believe that the features of the brand are well suited to what I like.	0.81	47.83			
	I prefer the service of the brand to the service and products of other competing brands.	0.77	38.75			
	I like the features of the brand services and products.	0.59	19.42			
	I like the performance and services of the brand.	0.65	23.48			
	I have repeatedly found the brand is better than other clothing, shoe and accessory brands.	0.84	54.00			

Table 4.15. (Continued)

Variable	Item	Std. factor Loading	<i>t</i> - value	Cronbach's <i>alpha</i>	Construct reliability ^a	Variance extracted ^b
	Repeatedly, the performance of the brand is superior to that of other clothing, shoe and accessory brands.	0.76	36.68			
	I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands.	0.73	32.40			
	I will always continue to choose the features of the brand over other clothing, shoe and accessory brands.	0.75	34.86			
	I will always choose to use the brand in preference to competitor clothing, shoe and accessory brands.	0.66	24.25			
	I will always be willing to try new products offered by the brand.	0.69	27.45			

^a Construct reliability is calculated as $(\sum \text{std. loading})^2$ divided by $(\sum \text{std. loading})^2 + \sum \epsilon_j$. Measurement error is 1.0 minus the reliability of the indicator, which is the square of the indicator's standardized loading (Hair, Anderson, Tathan, & Black, 1995).

^b The variance extracted measure is calculated as $\sum \text{std. loading}^2$ divided by $\sum \text{std. loading}^2 + \sum \epsilon_j$ (Hair et al., 1995)

Table 4.16. Correlations Between the Variables

Construct	1	2	3	4	5	6	7	8	9
1. Socialization	1								
2. Entertainment Seeking	.57***	1							
3. Self-status Seeking	.59***	.23***	1						
4. Information Seeking	.22***	.43***	-.12*	1					
5. Convenience Seeking	.08	.35***	-.10	.67***	1				
6. Social Capital	.76***	.56***	.40***	.51***	.35***	1			
7. Knowledge Sharing	.61***	.37***	.29***	.36***	.26***	.84***	1		
8. Community Commitment	.55***	.37***	.20***	.43***	.34***	.87***	.79***	1	
9. Brand Loyalty	.09	.26***	-.16**	.60***	.48***	.42***	.29***	.44***	1

Note: significant; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

The Latent Model with the Second-Order Factor

Figure 4.3 shows the variables used in the latent model testing and the visual summary of testing results. Social capital measure structure of the proposed model (see Figure 2.4 in Chapter 2) was altered to the second order factor model, in which Hypotheses 5, 6, and 7 were combined into Hypothesis 5. Hypotheses 4 through 11 were tested by the maximum likelihood estimation procedure using Mplus v7. The alternate model consisted of five exogenous variables (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) and four endogenous variables (social capital, knowledge sharing, community commitment, brand loyalty). Each latent construct was represented by multiple items in the observed constructs. Results revealed acceptable model fit to the data with a *chi-square* of 3310.10 ($df=1433$, $p<.001$), CFI of .91, RMSEA of .051, and SRMR of .080. Ten structural paths out of 21 paths in the structural model were statistically significant (see Table 4.17).

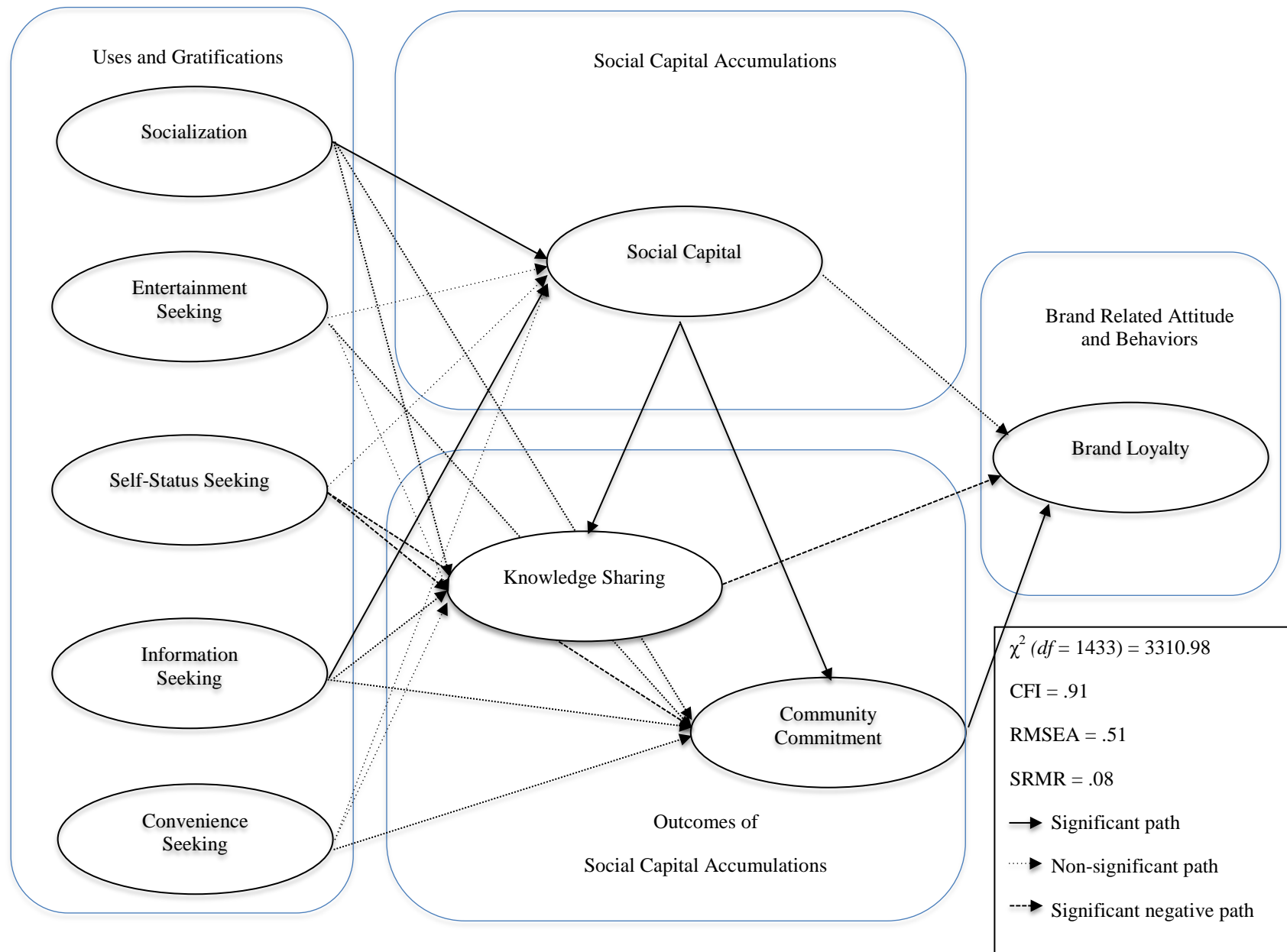


Figure 4.3. The Alternate Model Showing the Hypothesized Relationships between the Variables

Table 4.17. Standardized Path Coefficients and Fit Statistics for the Alternate Model

	Hypothesis			Direction of effect	Standardized path coefficient	<i>t</i> -value	<i>p</i> -value
H3	Social capital	→	Knowledge sharing	+	.90	9.24	.000
H4	Social capital	→	Community commitment	+	.91	9.94	.000
H5a	Socialization	→	Social capital	+	.66	9.75	.000
H5b	Entertainment seeking	→	Social capital	n.s	-.00	-.05	.957
H5c	Self-status seeking	→	Social capital	n.s	.05	.95	.342
H5d	Information seeking	→	Social capital	+	.30	4.51	.000
H5e	Convenience seeking	→	Social capital	n.s	.11	1.90	.06
H8a	Socialization	→	Knowledge sharing	n.s	.12	1.48	.139
H8b	Entertainment seeking	→	Knowledge sharing	n.s	-.09	-1.80	.072
H8c	Self-status seeking	→	Knowledge sharing	-	-.11	-2.19	.029
H8d	Information seeking	→	Knowledge sharing	-	-.03	-.55	.050
H8e	Convenience seeking	→	Knowledge sharing	n.s	.04	.81	.419
H9a	Socialization	→	Community commitment	n.s	-.16	-1.26	.208
H9b	Entertainment seeking	→	Community commitment	n.s	-.10	-1.90	.508
H9c	Self-status seeking	→	Community commitment	-	-.17	-2.89	.004
H9d	Information seeking	→	Community commitment	n.s	-.09	-1.22	.223
H9e	Convenience seeking	→	Community commitment	n.s	.06	.98	.328
H10a	Social capital	→	Brand loyalty	n.s	.18	.89	.424
H11a	Knowledge sharing	→	Brand loyalty	-	-.34	-1.46	.005
H11b	Community commitment	→	Brand loyalty	+	.59	5.43	.001

Note: +: Significant positive effect

- : Significant negative effect

n.s: Non-significant effect

Results of Alternate Model Testing

Hypotheses 3 through 4 predicted that social capital accumulations (structural, cognitive, and relational capital) positively influence the outcomes of social capital accumulations (knowledge sharing, community commitment). As expected, social capital predicted knowledge sharing. The standardized path coefficient between social capital and knowledge sharing was .90 ($t = 16.24, p \leq .001$), providing support for Hypothesis 3. The standardized path coefficient between social capital and knowledge sharing was .90 ($t = 16.24, p \leq .001$), providing support for Hypothesis 4.

The H5 series posited that consumers' needs to use an online brand community influence social capital components: socialization (H5a), entertainment seeking (H5b), self-status seeking (H5c), information seeking, and (H5d), and convenience seeking (H5e). The standardized path coefficient (β) between (H5a) socialization and social capital was .66 ($t = 9.78, p \leq .001$), providing support for Hypothesis 5a. The standardized path coefficient (β) between (H5d) information seeking and social capital was .30 ($t = 4.51, p \leq .001$), providing support for Hypothesis 5d. There are no significant paths among entertainment seeking ($\beta = -.001, t = -.05, p = .96$), self-status seeking ($\beta = .05, t = .95, p = .34$), and convenience seeking ($\beta = .11, t = 1.90, p = .06$) with structural capital. Therefore, Hypotheses 5b, 5c and 5e were not supported.

Hypotheses 8 through 9 predicted that consumers' needs to use an online brand community (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) positively influence the outcomes of social capital accumulations (knowledge sharing, community commitment). The H8 series posited that socialization (H8a), entertainment seeking (H8b), self-status seeking (H8c), information seeking (H8d), and convenience seeking (H8e) influence knowledge sharing. All paths related to Hypotheses 8a

through 8e were insignificant except for H8c and H8d. However, the standardized path coefficients from information seeking to knowledge sharing indicated significant negative paths ($\beta = -.11$ $t = -.55$, $p = .03$), although the correlation between information seeking and knowledge sharing was positive (.37). Also, the standardized path coefficients from information seeking to knowledge sharing indicated significant negative paths ($\beta = -.03$ $t = -.55$, $p = .05$), although the correlation between information seeking and knowledge sharing was positive (.29). The reason could be collinearity between the model's variables, affecting the calculated path coefficient of entertainment seeking and self-status seeking (Hair et al., 2006). Therefore, Hypotheses 8a through 8e were not supported.

The H9 series posited that socialization (H9a), entertainment seeking (H9b), self-status seeking (H9c), information seeking (H9d), and convenience seeking (H9e) influence community commitment. All paths related to Hypotheses 9a through 9e were insignificant.

Hypotheses 10 through 11 predicted that social capital accumulations and outcomes of social capital accumulations (knowledge sharing, community commitment) positively influence brand loyalty. Although the proposed model showed that relational capital predicted brand loyalty, the alternate model showed insignificant relationship between social capital and brand loyalty ($\beta = .18$, $t = .89$, $p = .424$). Changing social capital structure in the alternate model could affect the significance of the path coefficient. Therefore, Hypothesis 10 was rejected.

The H11 series posited that (H11a) knowledge sharing and (H11b) community commitment influence brand loyalty. Hypothesis 11a posited that knowledge sharing influences brand loyalty, and a significant path between knowledge sharing and brand loyalty was found. However, the standardized path coefficients from knowledge sharing and brand loyalty indicated significant negative paths ($\beta = -.34$ $t = -1.46$, $p = .005$), although the correlation between self-

status seeking and knowledge sharing was positive (.84). The reason could be collinearity between the model's variables, affecting the calculated path coefficient of entertainment seeking and self-status seeking (Hair et al., 2006). Therefore, Hypotheses 11a was not supported. As expected, community commitment predicted brand loyalty. Hypothesis 11b posited that community commitment positively influences brand loyalty. The standardized path coefficient between community commitment and brand loyalty was .59 ($t = 5.43, p \leq .001$), providing support for Hypothesis 11b.

The alternate model was compared with the proposed model to see if there is a more parsimonious explanation of the proposed model. Table 4.18 summarized relationship results of the alternate model compared with the proposed model test results. In the alternate model, only socialization and information seeking positively influenced social capital. Then, social capital influenced social capital outcomes such as knowledge sharing and community commitment. However, new significant relationships were found in the alternate model between brand loyalty and exogenous variables. In the proposed model, relational capital and community commitment to brand loyalty had significant relationships, but in the alternate model, there was no significant relationship between relational capital and brand loyalty, and both social capital outcomes, knowledge sharing and community commitment, positively influenced brand loyalty. Therefore, in the alternate model, it was clarified that consumers' needs for socialization and information seeking are gratified by accumulating social capital and participating in an online brand community through knowledge sharing and community commitment. Finally, these social capital outcomes influence brand loyalty.

Table 4.18. Comparison between Standardized Path Coefficients of the Proposed Model and Standardized Path Coefficients of the Alternate Model

Predictor Variables	Outcome Variables									
	Social Capital				Knowledge sharing		Community commitment		Brand loyalty	
	Structural capital	Cognitive capital	Relational capital		Proposed model	Alternate model	Proposed model	Alternate model	Proposed model	Alternate model
Socialization	.7***	.43***	.54***	.66***	.12	.12	.14	-.16	—	—
Entertainment seeking	-.04	-.05	-.01	-.001	-.09	-.09	-.10	-.10	—	—
Self-status seeking	.19***	-.05	.003	.05	-.11*	-.11*	-.12*	-.17**	—	—
Information seeking	.04	.33***	.24***	.30***	-.03	-.03	.01	-.09	—	—
Convenience seeking	.04	.09	.22***	.11	.04	.04	.07	.06	—	—
						.90***		.91***	—	.18
Social Capital	Structural capital	—	—	—	.33***		.10		-.38***	
	Cognitive capital	—	—	—	-.04		.11*		.06	
	Relational capital	—	—	—	.61***		.64***		.55***	
Knowledge sharing	—	—	—	—	—	—	—	—	-.15	-.34**
Community commitment	—	—	—	—	—	—	—	—	.29**	.59***
R2	36%	65%	47%	30%	30%	26%	30%	19%	65%	75%

Note: significant; * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

CHAPTER 5. DISCUSSION and CONCLUSIONS

This chapter summarizes the research findings of the study and provides scholarship and managerial implications. The summary consists of three parts: 1) the descriptive analysis of the sample, 2) the preliminary analysis testing dimensionalities of variables, and 3) the test of the proposed model. Finally, the chapter ends with the conclusion, implications, limitations and recommendations for future research.

Summary and Discussion

Online brand communities are “a specialized, non-geographically bound community based on a structured set of social relations among admirers of a brand” (Muniz & O’Quinn, 2001, p. 412,). The fast growth of this type of social media has been spurred on by consumers and apparel retailers. Through specialized interaction among consumers, brand communities provide information about pre-purchases, purchases, and follow-ups regarding products and services to consumers (Jan, Olfman, Ko, Koh, & Kim, 2008). In addition, brand communities work for retailers to increase consumers’ loyalty toward brands as impacted by consumers’ enhanced relationships with, attitudes toward, and actions related to brands (Muniz & Schau, 2005; Füller, 2008;). Brand communities increase consumers’ brand knowledge (Brown, Kozinets, & Sherry, 2003) and word-of-mouth advertising outside online brand communities (Brown, Broderick, & Lee, 2007). However, not all online brand communities are successful at generating consumer interactions and increasing brand loyalty. The biggest challenge of retailers is the facilitation of conversations or social interaction for creating knowledge sharing among members and then maintaining consumer interest to continue participation in the online brand community.

To date, this study examined the following points:

(1) what needs compel consumers to participate in an online brand community and what needs are gratified through membership in an online brand community,

(2) what social resources are generated in an online brand community and influence knowledge sharing in and commitment to an online brand community,

(3) what outcomes of social interaction influence brand related attitude and behavior such as loyalty toward the brand.

First, through the lens of uses and gratification theory, this study confirmed the dimensions of needs that consumers have to compel them to participate in an online brand community. Second, based on social capital and network theory, the social resources generated by individuals' interactions in an online brand community were confirmed. Finally this study tested a conceptual model developed by incorporating (1) uses and gratification theory and (2) social capital and network theory to explain the process of gratifying needs to use an online brand community through social capital accumulation. These include structural capital, cognitive capital, and relational capital as well as the outcomes of social capital such as knowledge sharing, community commitment and their subsequent influence on consumer loyalty behaviors toward the brand.

Descriptive Analysis of Sample

A total of 499 respondents with usable responses were accessed through Mturk. Only respondents living in the United States were included in the sample. In addition, the respondents in the sample answered positively to a screening question asking whether they were participants or members of a consumer-generated or business-generated online brand community. Through this process, respondents included U.S. consumers who visit online brand communities discussing apparel, shoe, and accessory brands.

This sample of 499, composed of 44.3% females and 54.3% males with a mean age of 30.33 years, moderately represented the US population. Most respondents were White or of European American ethnicity (75.1%), but the sample also included diverse ethnic groups (10.5% Black or African American, 8.1% Hispanic or Latino, 9.1% Asian or Asian American, and 1.8% Native American). The consumer sample moderately represents the population geographically located in the United States. In regard to education level, a total of 73.5% of the respondents had some level of college education or had obtained a higher education degree (i.e., Bachelor, MS, MBA, PhD), indicating that the sample included individuals with a higher level of education than the average U.S. population.

Most respondents (88%) reported purchasing more than 3 to 4 apparel, shoe, and accessory items during a month. Regarding Internet and online brand community usage, almost all of the respondents (91%) presented their level of internet experience as “experienced” or “very experienced.” On average, 32.4% spent more than six hours per day in internet activity. Also, 72.1% of the respondents visited online brand communities more than once a week. Most of the respondents (47.7%) stated that their level of duration for each visit was between 10 and 30 minutes.

Dimensionality of Variables

Confirmatory factor analysis with good model fit revealed five dimensions of needs to use an online brand community: Socialization, Entertainment Seeking, Self-status Seeking, Information Seeking, and Convenience Seeking. Internal consistency of multiple indicators was examined using Cronbach’s *alpha*; all factors had *alphas* above .70, satisfying recommendations for acceptable level of reliability (Nunnally & Bernstein, 1994). Discriminant validity was confirmed with correlations among the five factors meeting the criterion of $r < .85$ (Kline, 1998)

and AVE values of each dimension. The low variance below .50 of the information seeking factor was likely due more to measurement errors than the variance explained by the construct. Consequently, Hypothesis 1, that the five individual needs which are gratified by using an online brand community are entertainment, information, convenience, socialization, and self-status seeking, was confirmed.

Confirmatory factor analysis with acceptable model fit revealed three dimensions of social capital accumulations in the online brand community context: (1) structural (i.e., social interaction ties), (2) cognitive (i.e., shared vision, shared language) and (3) relational (i.e., trust, norms of reciprocity, identification, volunteerism) assets. Discriminant validity was confirmed with positive correlations among the three factors meeting criterion of $r < .85$ (Kline, 1998) for each dimension. AVE's were greater than the accepted level of .50 except for the relational capital factor (Fornell & Larcker, 1981). The low variance below .50 of the information-seeking factor indicated that it had larger variance due more to measurement errors than the variance explained by the construct. Consequently, Hypothesis 2, confirming three social capital accumulation factors—structural, cognitive and relational capital in an online brand community—was supported.

Finally, validities of each key variable —knowledge sharing, community commitment and brand loyalty were confirmed with confirmatory factor analysis. Each variable had one dimension with acceptable internal consistencies.

Test of the proposed model. Confirmatory factor analysis was performed to specify the measurement model (Muthén & Muthén, 2000) prior to testing the structural equation modeling of the proposed model. The fit indices of the measurement model showed fair model fit. Consequently, 11 research variables were included in the model. They were: entertainment

seeking, information seeking, convenience seeking, socializing, and self-status seeking, structural capital, cognitive capital, relational capital, knowledge sharing, community commitment and brand loyalty.

To test the proposed model, a structural equation modeling was performed with five exogenous variables (socialization, entertainment seeking, self-status seeking, information seeking, convenience seeking) and six endogenous variables (structural capital, cognitive capital, relational capital, knowledge sharing, community commitment, brand loyalty). Results revealed the model fit the data.

The results indicated that consumers' needs for socialization in an online brand community positively related to all dimensions of social capital (structural, cognitive and relational capital.) That is, individuals who have positive expectations to be socialized in an online brand community have higher social capital accumulations to be gained by belonging to an online brand community. Also, self-status seeking positively influences structural capital. It was supported that consumers use social media and build network ties as a means of building the strength of emotional intensity between individuals in online brand communities. Furthermore, individuals maintain relationships with distant acquaintances via weak ties in online networks (Chu, 2011).

Among individuals' needs to participate in online brand communities, information seeking positively influenced cognitive and relational capital; that is, consumers who have personal needs for information seeking build the intellect and skills to communicate with others as well as positive and strong relationships with others and the group in an online brand community. Convenience seeking also positively leads to building relational capital. However, individuals' entertainment seeking does not influence any dimension of social capital

accumulations in an online brand community. Individuals may be entertained by observing others' interactions instead of becoming involved in interaction with others, and this observing may not involve building social capital.

The results indicated that any consumers' needs to use an online brand community did not directly influence the outputs of social capital accumulations such as knowledge sharing and community commitment. The results create a discrepancy with previous studies of online brand community participation. Although Sung, Kim, Kwon, and Moon's (2010) study argued that information and entertainment seeking, as well as social motivations such as socializing, are antecedents for predicting community commitment, and Sukoco and Wu's (2010) study confirmed that socially related motivations such as affiliation searching and confirmation of social status positively influenced consumers' participation in an online brand community, individuals' participation may not gratify their needs to use an online brand community. As a consequence, they may not become involved in knowledge sharing and developing community commitment. However, dimensions of social capital influence knowledge sharing and community commitment. Building network ties with other consumers facilitates knowledge sharing in an online brand community, supporting that individuals use acquaintance as an easy and inexpensive social capital bridge for sharing information with each other (Danath & Boyd, 2004).

Relational capital is based on belonging and positive attitude toward a community, and members of the community influence consumers' knowledge sharing in an online brand community. The results support previous studies of voluntary online community users in which an individual's social capital influenced his or her knowledge contribution (Wasko & Faraj, 2005; Chiu, Hsu, & Wang, 2006). In addition, positive and strong relationships with others positively

influence consumers' community commitment. The results are consistent with Chiu et al.'s (2006) study that structural capital founded on social interaction ties and relational capital based on expectation of reciprocity and identification with the groups of people in a community has a significant positive relationship with an individual's knowledge sharing quantity. In addition, positive and strong relationships with other consumers of online brand communities positively influenced the individual's community commitment.

Cognitive capital based on shared visions and language in an online brand community influence an individual's understanding of knowledge shared, but not their contributions to shared knowledge. This is consistent with previous research that cognitive capital does not increase the likelihood of helpful contributions in the community (Wasko & Faraj, 2005). Accordingly, the intellect and skills to communicate built by shared vision and language in an online brand community influence consumers' participation and emotional attachment toward the community but not knowledge sharing. Therefore, unlike Nahapiet and Ghosal's (1998) research in social capital, community members' shared language in an online brand community does not influence the exchange of experience and information about products and services of brands. However, having shared vision and goals with an online brand community help individuals to access knowledge shared by others and to evaluate the quality and quantity of knowledge in the community. Consequently, individuals' cognitive capital does not directly contribute their knowledge sharing and social interaction with others, but rather simply increases traffic in an online brand community.

The results of this study indicated that individuals' relational capital positively influences brand loyalty toward individual brands. Furthermore, the findings support that consumers who have a strong sense of belonging, emotional attachment, trust, satisfaction, and need to

participate in an online brand community show more loyalty toward a brand by recommending and purchasing it (Jang, Olfman, Ko, Koh, & Kim, 2008). The results indicated that knowledge sharing does not influence brand loyalty, whereas community commitment influences brand loyalty. Consequently, it was supported that consumers' online brand community involvement effects consumers' likelihoods of participating in buying products (Algesheimer, Borle, Dholakia & Singh, 2010). However, Wu and Sukoco's (2010) study showing the positive effect of knowledge sharing on brand loyalty was not supported.

The fully recursive model was analyzed to test all possible relationships among the exogenous and endogenous variables. The fully recursive model revealed significant relationships between information seeking and brand loyalty and between convenience seeking and brand loyalty. A model including new findings from the fully recursive model can be tested with new data in the future.

An alternate model was examined to explore whether a more parsimonious explanation with the second order factor analysis model of social capital construct provided insights. The alternate model confirmed the second order factor structure of social capital accumulation based on three first-order factors (structural, cognitive, and relational social capital) and the relationships between social capital and social capital outcomes (i.e., knowledge sharing, community commitment). Also, it was confirmed that social capital indirectly influence brand loyalty through social capital outcomes.

Conclusions

The present study investigated consumers' social interaction and participation in the context of online brand community and brand loyalty. Findings of this study provide understanding about the domain of consumer participation in an online brand community and

social resources they gain as they interact with others in an online brand community. In addition, the findings increase understanding of the mechanism of how consumers' needs to participate in an online brand community lead to social capital accumulations and how these social resources influence consumer interaction with and cohesion toward communities. In turn, individuals' social capital assets and outcomes acquired in an online brand community were found to influence their attitudinal and behavioral loyalty toward brands. This study identified dimensions of social and individual needs to participate in an online brand community and dimensions of social capital generated by interaction in an online brand community. This study also proposed a research model, explaining the needs gratifying process from use of an online brand community through social capital accumulations generated in an online brand community environment and the effect of social capital accumulations on social interaction, community commitment, and attitudinal and behavioral loyalty toward brands. Therefore, findings of the present study contribute to the literature by applying two theories, uses and gratification theory and social capital and network theory in the context of an online brand community. Unlike other literature applying uses and gratification theory in social media contexts, in this study consumers' social and psychological needs did not influence their engagement in online brand communities and mediated communication. That is, interactions with others did not gratify psychological needs. However, in this study needs are indirectly related to use of social media through social resources generated in an online brand community. Consequently, social and individual needs are gratified through acquiring social resources that enable consumers to interact with other consumers (i.e., knowledge sharing) and to build relationships with a community (i.e., commitment). The findings expand uses and gratification theory to the online brand community context wherein individuals share social resources generated in the community for using online

brand communities (i.e., interact through social media communication behavior) to gratify their needs. Also, this study is the first attempt to examine social capital generated in a social media context as a factor mediating individuals' use of social media to interact with other users and loyalty toward brands endorsed in the community.

In addition, the findings of this study are a contribution to marketers and retailers by providing information concerning how they might facilitate social interaction for creating brand knowledge and community commitment and how they can effectively use an online brand community to increase consumers' loyalty toward a brand. By shaping tools or operating strategies of an online brand community to provide opportunities for consumers to build networks with other consumers, to share common issues about brands, and to experience positive feeling and emotions toward a community and community members, marketers and retailers can facilitate traffic in an online brand community to provide social resources consumers use for their interactions. Increasing traffic would facilitate brand knowledge sharing and recruit new consumers and, in turn, improve consumers' loyalty toward the online brand community and the brand. Marketers and retailers may ultimately increase effectiveness of an online brand community by building a stronger relationship with consumers through the online brand community.

Implications

The findings of this study provide valuable insights for both academics and professionals related to increasing brand loyalty in an online brand community. With regards to the theoretical implications, this study contributes conceptually to develop theoretical linkages previously untested on needs to use an online brand community, social capital accumulation (structural capital, cognitive capital, relational capital), and outcomes of social capital (knowledge sharing,

community commitment) based on uses and gratification and social capital and network theory. Consumers' interaction and participation in online communities are explained in part as a result of the social and psychosocial needs of individuals and the social resources generated within communities. This study expanded the understanding of the resources individuals gain based on networking in online brand communities by applying the concepts of social capital and network theory. This is a newer application of social capital and network theory into non-geographically located communities. Consistent with previous studies in face-to-face interaction, social capital in an online brand community also can be an asset which is socially generated, maintained, and exchanged by individuals in the virtual community. Thus, the respondents build continual knowledge sharing among members and continued participation. The empirical findings of this study provide an understanding of how an individual's social and psychological needs to use an online brand community are gratified through social capital accumulations generated in networks of communities, and this gratification connects to individuals' continuous participation and success of the community.

An additional contribution of this study is the exploration of multiple dimensions of social capital generated in an online brand community--structural, cognitive, and relational capital--which are applicable in explaining social capital assets and which are needed to gratify individual's social and personal needs in the context of online brand communities for apparel, shoes, and accessory products. Furthermore, this study reinforces that consumers' social capital assets, which lead them to willingly share knowledge and to participate in online brand communities, positively influence brand loyalty.

The findings of this study have managerial implications for apparel marketers and retailers who operate online brand communities as a marketing tool. Marketers should

understand what specific needs consumers have in regard to their participation in an online brand community and how interaction and participation in an online brand community satisfies and reinforces consumers' brand loyalty. According to findings of this study, to increase interaction and traffic in an online brand community, which influences consumers' knowledge about brands and products, it is important to help consumers to generate and use structural and relational capital within communities. For example, consumers who have socialization and self-status seeking needs may build structural interactional ties through posting or responding to messages, and through this process they may become knowledge contributors about the brand. In addition, consumers who seek information about products and brands for time convenience do knowledge sharing with others as they accumulate relational capital at the individual level.

Relational capital accrues by building strong online community identification, trusting other members in an online community, and developing a strong sense of responsibility to participate in an online community and in mutual and cooperative norms within an online community. For consumers', continuous participation and cognitive and relational capital possession within the community is important. While seeking information about products and brands, consumers share understanding and language of the community, and this encourages consumers to keep visiting an online brand community. Also, consumers who have relational capital, positive feeling and positive emotions toward a community and community members are more willing to re-visit an online brand community.

Finally, marketers should be aware that there are individuals who have socialization needs and not brand-related needs fulfilled by participation in an online brand community, but these individuals can become loyal consumers of the brand because they accumulate social capital through continuing visits to the community. Moreover, although consumers'

entertainment seeking does not lead to them to interact or to participate, they can still be entertained by observing other consumers' social interaction within the community. Therefore, this finding also suggests that participating members who develop socialization, self-status seeking or information seeking and convenience seeking are important groups who may increase traffic and influence other observers in the community. They contribute by (1) accessing shared information, (2) evaluating the benefits of exchanging resources, and (3) exchanging experiences and information with others in the community (Nahapiet & Ghoshal, 1998) and possibly outside the community. Consequently, to satisfy consumers' social and individual needs to visit online brand communities, retailers should have marketing strategies to increase structural, cognitive and relational capital within communities that encourage consumers' social interaction within and cohesion toward the community and thus positively influence consumers' loyalty toward the brand.

Limitations

The interpretation of the findings of this study should be considered with several limitations. First, in terms of demographics, the results may moderately represent but not be generalized to the US population, considering that the sample is younger and more educated than the general population and includes lower representation of some and higher representation of other ethnic groups. The data was collected through Amazon Mechanical Turk, a crowdsourcing platform for human tasks such as surveys; representativeness of the population is not guaranteed by Amazon Mechanical Turk, as individuals participate in surveys to acquire monetary credits. The specific sample was limited by the researcher to include only participants who currently participate in an apparel, shoe, or accessory online brand community. Therefore, the sample tends to include only consumers located in the United States who are savvy at using social media

and are possibly more interested in nationally branded apparel, shoes, and accessories than is the population as a whole and more interested in participating in online communities. In addition, a generalization of these findings to non-U.S. consumers cannot be made. Interaction among consumers can differ cross-nationally based on cultural (e.g., collectivism vs. individualism), social (e.g., education), and economic characteristics as well as internet infra-structure in a society.

Second, the results may not be applicable to consumers who are members of other product category online brand communities. The present study focused on consumers of fashion-related brands. Therefore, caution is needed in generalizing from these findings to consumers of all online brand communities because the product category may affect the results.

Third, the results of this study may be biased due to self-reported measures (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). In behavioral research studies, the self-report bias is likely to be present because respondents provide the data for both the predictor and the criterion variables in the same measurement context using the same item context and similar item characteristics. Respondents can unconsciously or consciously skew their answers to present themselves in a certain way because respondents often try to maintain consistency in their responses to similar questions (Schmitt, 1994). Also they may be unable to give an accurate response due to cognitive biases toward an online brand community or fashion brands, or by not having as much knowledge about the online brand community experience as this researcher assumed for the survey.

Future Research

Findings of the present study suggest several avenues for research. First, future research should examine the relationships of needs to use brand communities, social capital

accumulations and outcomes from brand community participation, and brand loyalty and purchase intention outcomes in online brand communities with diverse demographic samples comparing age, gender, education, and cultural difference to expand the explanation of consumers' social interaction in an online brand community. An individuals' level of social media use and fashion product involvement could be varied by age, gender, ethnicity, or education, so these factors should be examined in diverse samples. And because social interaction in online communities may be influenced by cultural (e.g., collectivism vs. individualism), social (e.g., education), and economic characteristics (e.g., income level) in a society, brand community participation should be studied in cultures other than the U.S.

Future research could compare consumer-generated and business-generated communities to examine the relationships of needs to use brand communities, social capital accumulations and outcomes from brand community participation, and brand loyalty and purchase intention outcomes. Consumers have more exogenous incentive reasons to join business-generated online brand communities such as coupons, cyber money, or free samples (Sung et al., 2010); they may visit consumer-generated online brand communities with more personal and social motivations. In addition, consumers may perceive knowledge sharing as a source of marketing persuasion to improve the brand image in a business-generated community. Based on the set/reset model (Martine, 1896), when consumers encounter a source of unwanted bias, mental processes and behaviors are instigated to correct for potential influences. Therefore, if certain information and knowledge sharing generated by retailers in a business-generated community are repeatedly and consistently met with skepticism, then it is plausible that consumers will activate a consciously-mediated correction process to screen information from retailers. Consequently, skepticism could influence their attitude toward and behaviors in an online brand community. Consequently,

consumers may reveal different patterns of gratifying their needs and use of social capital according to types of online brand communities they use.

Future research could also focus on the relative performance of social capital generated in an online brand community in predicting community commitment and brand loyalty. The present study focused on social interaction as knowledge sharing and participation as community commitment. However, there are other behaviors that reflect and influence brand loyalty, such as using social capital, observing others' social interaction and knowledge sharing, using information for purchasing, recommending that other consumers participate in the online brand community or purchasing a brand. For example, cognitive capital does not influence knowledge sharing but influences community commitment. It is possible that individuals who do not directly interact with other consumers in an online brand community but who continually visit online brand communities may gain cognitive capital by observing social interactions of others in the community. These types of research may expand understanding of the impact of social capital; the understanding could be used by marketers to increase social traffic in an online brand community and shape success of the community and brand loyalty.

The fully recursive model testing revealed that information seeking and convenience seeking directly influence brand loyalty. Therefore, consumers may gratify their needs of information and convenience seeking by observing other's interaction and knowledge sharing. That is, these needs connect to brand loyalty not through involvement in direct social interaction in an online brand community. In future research, these relationships should be empirically tested.

Further research should examine other consequences of knowledge sharing in an online brand community. Knowledge sharing may indirectly influence brand loyalty as revealed by high

correlation with community commitment, which in turn influences brand loyalty. Also, knowledge sharing may directly affect brand loyalty according to the individuals' level of using or needs to use an online brand community. Therefore, these relationships should be empirically tested in future research.

APPENDIX A

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 4/3/2013

To: Jihyeong Son
31 MacKay

CC: Dr. Mary Lynn Damhorst
1068 LeBaron Hall

From: Office for Responsible Research

Title: Consumers in an Online Brand Community

IRB ID: 13-141

Study Review Date: 4/2/2013

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
 - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
 - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

Please be aware that **approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.**

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

IRB ID: 13-141

INSTITUTIONAL REVIEW BOARD (IRB)

Exempt Study Review Form

RECEIVED

MAR 08 2013

Title of Project: Consumers in an Online Brand Community

By IRB

Principal Investigator (PI): Jihyeong Son		Degrees: M. S.
University ID: [REDACTED]	Phone: 614-214-2575	Email Address: json@iastate.edu
Correspondence Address: 31 Mackay Iowa State University		
Department: Apparel, Events, and Hosp. Mgt		College/Center/Institute: Human Sciences
PI Level: <input type="checkbox"/> Tenured, Tenure-Eligible, & NTER Faculty <input type="checkbox"/> Adjunct/Affiliate Faculty <input type="checkbox"/> Collaborator Faculty <input type="checkbox"/> Emeritus Faculty <input type="checkbox"/> Visiting Faculty/Scientist <input type="checkbox"/> Senior Lecturer/Clinician <input type="checkbox"/> Lecturer/Clinician, w/Ph.D. or DVM <input type="checkbox"/> P&S Employee, P37 & above <input type="checkbox"/> Extension to Families/Youth Specialist <input type="checkbox"/> Field Specialist III <input type="checkbox"/> Postdoctoral Associate <input checked="" type="checkbox"/> Graduate/Undergrad Student <input type="checkbox"/> Other (specify:)		

FOR STUDENT PROJECTS (Required when the principal investigator is a student)

Name of Major Professor/Supervising Faculty: Mary Lynn Damhorst		
University ID: [REDACTED]	Phone: 515-294-9919	Email Address: mldmhrst@iastate.edu
Campus Address: 1068 Lebaron		Department: Apparel, Events, and Hosp. Mgt
Type of Project: (check all that apply) <input checked="" type="checkbox"/> Thesis/Dissertation <input type="checkbox"/> Class Project <input type="checkbox"/> Other (specify:)		

Alternate Contact Person:	Email Address:
Correspondence Address:	Phone:

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies. Misrepresentation of the research described in this or any other IRB application may constitute non-compliance with federal regulations and/or academic misconduct.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects are protected. I will report any problems to the IRB. See Reporting Adverse Events and Unanticipated Problems for details.
- I agree that modifications to the approved project will not take place without prior review and approval by the IRB.
- I agree that the research will not take place without the receipt of permission from any cooperating institutions, when applicable.
- I agree to obtain approval from other appropriate committees as needed for this project, such as the IACUC (if the research includes animals), the IBC (if the research involves biohazards), the Radiation Safety Committee (if the research involves x-rays or other radiation producing devices or procedures), etc.
- I understand that approval of this project does not grant access to any facilities, materials or data on which this research may depend. Such access must be granted by the unit with the relevant custodial authority.
- I agree that all activities will be performed in accordance with all applicable federal, state, local, and Iowa State University policies.

[REDACTED] 2/22/13
 Signature of Principal Investigator Date

[REDACTED] 2/22/13
 Signature of Major Professor/Supervising Faculty Date
 (Required when the principal investigator is a student)

I have reviewed this application and determined that departmental requirements are met, the investigator(s) has/have [REDACTED] the research, and the research design is scientifically sound and has scientific merit.
 [REDACTED] 2/22/13
 Signature of Department Chair Date

For IRB Use Only	<input type="checkbox"/> Not Research Per Federal Regulations	<input type="checkbox"/> No Human Participants	Review Date: April 2, 2013
	<input checked="" type="checkbox"/> Minimal Risk	EXEMPT Per 45 CFR 46.101(b): 2	
IRB Reviewer's Signature: Kate Howard			

Part A: Key Personnel

[illegible]

Please complete additional pages of key personnel as necessary.

Part B: General Overview

Please provide a brief summary of the purpose of your study:

The purpose of this study is to understand consumers in online brand communities. In particular, this study examine consumers' needs and motivation to participate in the online brand community, social interactions, feelings of social cohesion within the community, and brand loyalty.

Please provide a brief summary of your research design:

To conduct this study, an online survey adapting 7-point Likert-type scales from previous studies will be used to measure variables. To access consumers who are engaged in an online brand community, the researcher will contact operators of online brand communities to ask permission to hang a banner to introduce the link to the online survey. If permission for a banner instrument is not given, members' profiles including email addresses are shared via the online brand communities and will be sampled so that members can be contacted individually via email to ask for participation in this study.

Part C: Exemption Categories

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Are you conducting research on Educational Practices (e.g., instructional techniques, curriculum effectiveness, etc.)? If Yes, please answer questions 1a through 1e. If No, please proceed to question 2.
<input type="checkbox"/> Yes <input type="checkbox"/> No	1a. Will the research be conducted in an established or commonly accepted educational setting, such as a classroom, school, professional development seminar, etc.?
<input type="checkbox"/> Yes <input type="checkbox"/> No	1b. Will the research be conducted in any settings that would not generally be considered to be established or commonly accepted educational settings? If Yes, please specify: _____
<input type="checkbox"/> Yes <input type="checkbox"/> No	1c. Will the research procedures and activities involve normal educational practices (e.g., activities that normally occur in the educational setting)? Examples include research on regular or special education instructional strategies or the effectiveness of instructional techniques, curricula, or classroom management methods.
<input type="checkbox"/> Yes <input type="checkbox"/> No	1d. Will the research procedures include anything other than normal educational practices? If Yes, please specify: _____
<input type="checkbox"/> Yes <input type="checkbox"/> No	1e. Will the procedures include randomization into different treatments or conditions, radically new instructional strategies, or deception of subjects? If Yes, please specify: _____

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2. Does your research involve use of educational tests, survey procedures, interview procedures, or observations of public behavior? If Yes, please answer questions 2a through 2c. If No, please proceed to question 3.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2a. Will the research involve one or more of the following? (Check all that apply.) <input type="checkbox"/> The use of educational tests (cognitive, diagnostic, aptitude, achievement) <input checked="" type="checkbox"/> Surveying or interviewing adults <input type="checkbox"/> Observations of public behavior* of adults <input type="checkbox"/> Observations of public behavior* of children, when the researcher will not interact or intervene with the children <p style="text-align: center;">*Note: Activities occurring in the workplace and school classrooms are not generally considered to involve public behavior.</p>
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2b. Are all of the participants elected or appointed public officials or candidates for public office?

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Does the research involve the collection or study of <i>currently existing</i> data, documents, records, pathological specimens, or diagnostic specimens? If Yes, please answer questions 3a through 3c. If No, please proceed to question 4.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3a. Are all of the data, documents, records, or specimens publicly available?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	3c. Will the data you record for your study include ID codes? If Yes, please answer 3ci and 3cii. <div style="display: flex; justify-content: space-between;"> <div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div> <div> 3ci. Does a "key" exist linking the ID codes to the identities of the individuals to whom the data pertains? </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div><input type="checkbox"/> Yes</div> <div><input type="checkbox"/> No</div> <div> 3cii. Will any persons on the research team have access to this key? </div> </div>

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Does your research involve Taste and Food Quality tests and Consumer Acceptance Studies involving food? If Yes, please answer questions 4a through 4c. If No, please proceed to question 5.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4a. Is the food to be consumed normally considered wholesome, such as one would find in a typical grocery store?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	4b. If the food contains additives, are the additives at or below the level normally considered to be safe by the FDA, EPA or Food Safety and Inspection Service of USDA? Consider additives in commercially available foods found at a grocery store and/or any additives that are added to food for research purposes.

☐ Yes ☐ No

4c. If there are agricultural chemicals or environmental contaminants in the food, are they at or below the level found to be safe by the FDA, EPA or Food Safety and Inspection Service of USDA?

☐ Yes ☒ No

5. Is your study a research or demonstration project to examine

- Federal public benefit or service programs such as Medicaid, unemployment, social security, etc.; or
- Procedures for obtaining benefits or service under these programs; or
- Possible changes in or alternatives to those programs or procedures; or
- Possible changes in methods or levels of payment for benefits or services under these programs?

☐ Yes ☐ No

5a. If Yes, is the research or demonstration project pursuant to specific federal statutory authority?

Part C: Additional Information

☐ Yes ☒ No

6. Does your research involve any procedures that do not fit into one or more of the categories in items #1–#5 listed above, such as the following? (Check all that apply.)

- ☐ Usability testing of websites, software, devices, etc.
- ☐ Collection of information from private records when identifiers are recorded
- ☐ Procedures conducted to induce stress, moods, or other psychological or physiological reactions
- ☐ Presentation of materials typically considered to be offensive, threatening, or degrading
- ☐ Video recording or photographing non-public behaviors
- ☐ Use of deception (e.g., misleading participants about the procedures or purpose of the study)
- ☐ Physical interventions, such as
 - ☐ blood draws
 - ☐ new collection of biological specimens
 - ☐ use of physical sensors (ECG, EKG, EEG, ultrasound, etc.)
 - ☐ exercise, muscular strength assessment, flexibility testing
 - ☐ body composition assessment
 - ☐ measuring of height and weight
 - ☐ x-rays
 - ☐ changes in diet or exercise
- ☐ Tests of sensory acuity (i.e., vision or hearing tests, olfactory tests, etc.)
- ☐ Consumption of food (other than as described in #4) or dietary supplements
- ☐ Clinical studies of drugs or medical devices
- ☐ Other; please specify: _____

☐ Yes ☐ No

6a. If Yes, is your research conducted in an established educational setting, and are the checked procedures part of normal educational practices given that setting? If Yes, please describe:

☐ Yes ☒ No 7. Do you intend or is it likely that your study will include any persons from the following populations? (Check all that apply.)

☐ Prisoners
☐ Cognitively impaired
☐ Children (persons under age 18)
☐ Wards of the State
☐ Persons who are institutionalized

7 a. If Yes, please describe how they will be involved and what procedures they will complete:

☐ Yes ☒ No 8. Will any of the following identifiers be *linked to the data* at any time point during the research? (Check all that apply.)

☐ Names: ☐ First Name Only ☐ Last Name Only ☐ First and Last Name
☐ Phone/fax numbers
☐ ID codes that can be linked to the identity of the participant (e.g., student IDs, medical record numbers, account numbers, study-specific codes, etc.)
☐ Addresses (email or physical) - *email addresses will be collected for a drawing, but immediately separated from data. LPU PR email on 4/12/15, V16*
☐ Social security numbers
☐ Exact dates of birth
☐ IP addresses
☐ Photographs or video recordings
☐ Other; please specify: _____

☐ Yes ☒ No 9. Is there a reasonable possibility that participants' identities could be ascertained from any combination of information in the data? If Yes, please describe: _____

10. If Yes to *either* #8 or #9 above, please answer the following:

☒ Yes ☐ No 10a. Will participants' identities be kept confidential when results of the research are disseminated?

☐ Yes ☒ No 10b. Could any of the information collected, if disclosed outside of the research, reasonably place the subjects at risk of any of the following? (Check all that apply.)

☐ Criminal liability
☐ Civil liability
☐ Damage to the subjects' financial standing
☐ Damage to the subjects' employability
☐ Damage to the subjects' reputation

☐ Yes ☒ No

10c. Does the research, directly or indirectly, involve or result in the collection of any information regarding any of the following? (Check all that apply.)

- ☐ Use of illicit drugs
- ☐ Criminal activity
- ☐ Child, spousal, or familiar abuse
- ☐ Mental illness
- ☐ Episodes of clinical depression
- ☐ Suicidal thoughts or suicide attempts
- ☐ Health history
- ☐ History of job losses
- ☐ Exact household income other than in general ranges
- ☐ Negative opinions about one's supervisor, workplace, teacher, or others to whom the subject is in a subordinate position
- ☐ Opinions about race, gender, sexual orientation, or any other socially sensitive or controversial topics
- ☐ Sexual preferences or behaviors
- ☐ Religious beliefs
- ☐ Any other information that is generally considered to be private or sensitive given the setting of your research; if so, please specify: _____

After completion of Parts A, B, and C of this application, please send the completed form to:

Institutional Review Board (IRB)
Office for Responsible Research
1138 Pearson Hall
Ames, IA 50011-2200

Data collection materials (e.g., survey instruments, interview questions, recruitment and consent documents, etc.) do not need to be submitted with this application.

If you have any questions or feedback, please contact the IRB office at IRB@iastate.edu or 515-294-4566.

APPENDIX B

Amazon Mechanical Turk (recruiting message)

You are invited to participate in research investigating online apparel, shoes, and accessory brand communities!

This research investigates consumers' interaction in online brand communities. If you use an online community of apparel, shoe, and accessory brands, you can participate in this research. Please click the link below (or copy and paste the link on a new window) to participate. Once the survey is complete; you will be furnished with a six character code to use in the text box below.

To begin the survey, please click this link:

<http://humansciences.fanpop.sgizmo.com/s3/>

To receive credit for the survey, please insert the code that you receive upon completion.

Thank you for participating!

APPENDIX C

Consumers in an Online Apparel, Shoes, and Accessory Brand Community

Screening Question

ID 245

In this study, *online brand community* refers to *an online community formed on the basis of attachment to apparel, shoes, and accessory brands*.

Online brand communities in this study include: (1) consumer generated and (2) brand generated communities. *Consumer generated online brand communities* are voluntarily initiated and operated by enthusiastic consumers for the purpose of exchanging information and experiences about brands and products (e.g., www.niketalk.com, www.effortlessanthropologie.blogspot.com). *Brand generated communities* are purposefully initiated and controlled by marketers to build relationships with consumers. This is done in an effort to shape consumer feedback about their brands and products from a marketing point of view (e.g., <http://blog.urbanoutfitters.com>)

Also, online brand communities include *embedded in social network websites* such as Facebook, Tweepers, etc. (e.g., <https://www.facebook.com/jcrewaholics>, <https://www.facebook.com/gap>)

ID 246

Are you a member or a visitor of an online apparel, shoes, or accessory brand community? *

- ☐ Yes
- ☐ No

Consent Form

ID 2

RESEARCHER

This research is being conducted by Jihyeong Son (Ph. D. Candidate) for her dissertation in Apparel, Merchandising, and Design at Iowa State University. **This study is not related to any specific brands or retailers for business profits.**

INTRODUCTION

The purpose of this study is to better understand consumers who participate in online apparel, shoes, and accessory brand communities. In particular, this study examines consumers' needs and motivations to for participating in the online brand community, their social interactions, their feelings of social cohesion within the community, and their brand loyalty.

DESCRIPTION OF PROCEDURES

You are being asked to take part in this study because you are a member or a visitor of an online apparel, shoes, and accessory brand community. You should not participate if you are under 18 years of age.

If you agree to participate, you will be asked to complete a five part online survey about your responses toward using an online apparel, shoes, and accessory brand community. You will also be asked to provide demographic information such as age, gender, and ethnicity. This survey will take about 20 minutes to complete.

RISKS & BENEFITS

There are no foreseeable risks from participating in this study. If you decide to participate in this study, there may be direct benefits to retailers. Consumer interaction in an online apparel, shoes, and accessory brand community can greatly influence consumers' attitudes and loyalty toward brands. Retailers can get the benefit by understanding the consumers' social behaviors within online brand communities.

COSTS AND COMPENSATION

The participants will receive \$0.75 through Amazon Mechanical Turk. The compensation will be provided to participants because of their valuable participation and time spent answering the survey questions.

CONFIDENTIALITY

Response confidentiality is insured. Records identifying participants will remain confidential to the extent allowed by applicable laws and regulations. Records will not be made publicly available. If the results are published, your identity will remain completely confidential.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study. For further information about the study, please contact Jihyeong Son, json@iastate.edu, (515)294-8239, 31 Mackay Hall, Ames, IA.

If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

DATA Shortname / Alias: **CONSENT**

ID 3

Participant: Do you agree to participate in this research? *

☐ Yes ☐ No

Favorite online brand community

ID 242

1. Please indicate the name of the online apparel, shoes, or accessory brand community to which you feel most attached and participate in most frequently. *

ID 243

2. Please indicate the brand name endorsed by the community that you mentioned above. *

ID 244

3. Is this brand community you mentioned operated by a consumer or a brand? *

- ☐ ☐ Consumer generated community
- ☐ Business generated community

Section I: Why use an online brand community

other consumers I know.							
-------------------------------	--	--	--	--	--	--	--

◀ ||| ▶

entertained.

**DATA** Shortname / Alias: Self-status Seeking**ID** 19

6. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I visit the online brand community because I feel peer pressure to participate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community because it makes me look cool to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community to enhance my career through community participation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community to gain insight about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



about my purchases.							
I visit the brand community to seek sales and promotion information about products and services of the brand the community endorses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DATA Shortname / Alias: **Convenience Seeking**

ID **31**

8. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I visit the online brand community because I can obtain the brand products, service and event information for less effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community because I can use it anytime, anywhere.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community because it is convenient to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



endorses.							
I visit the online brand community to learn about useful things about the brand products and services the community endorses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community to learn more about the brand the community endorses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I visit the online brand community to find out what other people think about the brand the community endorses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section II: Social relationships

DATA Shortname / Alias: **Social Interaction Ties**

ID 43

10. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I maintain close social relationships with some members in the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I exchange ideas extensively with some members in the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know some members in the online brand community on a personal level.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have frequent communications with some members in the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DATA Shortname / Alias: **Shared Values**

ID 48

11. Please indicate your degree of agreement or disagreement with the statements shown below.

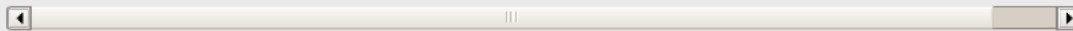
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
Members in the online brand community share the vision of helping others solve their problems with the brand products or services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members in the online brand community share the same goal of learning from each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members in the online brand community share the same value that helping others is worthwhile.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DATA Shortname / Alias: **Shared Language**

ID 52

12. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strong agree
Members in the online brand community use common terms or jargon.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members in the online brand community use understandable communication patterns during discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Members in the online brand community use commonly followed ways to post messages or articles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



ID 64

15. Please indicate your degree of agreement or disagreement with the statements shown below.

[illegible]

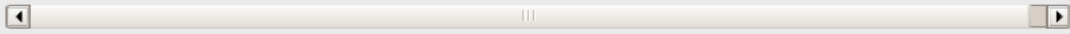
DATA | Shortname / Alias: **Voluntarism**

ID 69

16. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I assist members from the online brand community to find solutions to their problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to work together with other members to improve the online brand community experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I keep up with the latest technical developments to make useful contributions to the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

brand
community.



DATA Shortname / Alias: **Community Commitment**

ID 78

18. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I have psychological attachment to the members of the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think exchanging opinions with other members is important in the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect I will continuously participate in the online brand community's activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am an actively participating member of the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



DATA Shortname / Alias: **Brand Loyalty**

ID 84

19. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I intend to actively participate in the online brand community's activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I never miss an opportunity to recommend the online brand community to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If friends or relatives were to search for an apparel brand community, I would definitely recommend the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I plan to be a regular visitor to the online brand community in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consider investing my							

time or effort
with the
online brand
community
in the future.



DATA Shortname / Alias: **Brand Community Effect**

ID 90

20. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
The online brand community makes me happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The online brand community gives me pleasure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel good when I participate in the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



DATA Shortname / Alias: **Brand Community Trust**

ID 94

21. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I trust the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rely on the online brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The online brand community is an honest brand community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ID 239

22. Are there any members who you look for seeing their comments about the brand, its products, and events?

- ☐ Yes
- ☐ No

ID 248

Please explain why you look for the see the members' comments.

ID 249

23. Are there any members who affect your attitude and behaviors related to the brand and its' products?

- ☐ Yes
- ☐ No

ID 250

Please explain why you listen to the members.

Section III: Brand related behaviors

ID 113

24. Please indicate your degree of agreement or disagreement with the statements shown below.

[illegible]

If my friends or relatives search for a brand of clothing, shoes or accessories, I would definitely recommend the brand to them.						
--	--	--	--	--	--	--

DATA Shortname / Alias: **Brand Trust**

ID 120

25. Please indicate your degree of agreement or disagreement with the statements shown below.

[illegible]

ID 124

[illegible]

DATA Shortname / Alias: **Cognitive Loyalty**

ID 128

27. Please indicate your degree of agreement or disagreement with the statements shown below.

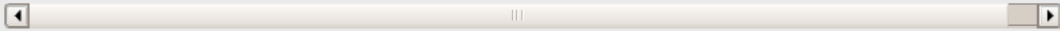
	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I believe that using the brand is preferable to other competing brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that the brand has the best offers at the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that the features of the brand are well suited to what I like.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer the service of the brand to the service and products of other competing brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DATA Shortname / Alias: **Affective Loyalty**

ID 138

28. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I have a negative attitude to the brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I dislike the brand products and services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like the features of the brand services and products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like the performance and services of the brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



DATA Shortname / Alias: **Conative Loyalty**

ID 143

29. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I have repeatedly found the brand is better than other clothing, shoe and accessory brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I nearly always find the offer of the brand inferior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have repeatedly found the features of the brand inferior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repeatedly, the performance of the brand is superior to that of other clothing, shoe and accessory brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

DATA Shortname / Alias: **Action Loyalty**

ID: 148

30. Please indicate your degree of agreement or disagreement with the statements shown below.

	Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree
I would always expect to continue to choose the brand over other clothing, shoe, and accessory brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will always continue to choose the features of the brand over other clothing, shoe and accessory brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would always continue to favor the offerings of Converse over other shoes and clothing brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will always choose to use the							

brand in preference to competitor clothing, shoe and accessory brands.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will always be willing to try new products offered by the brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

◀ ||| ▶

Section VI: Interacting with others

shop.							
My friends think of me as a good source of information when it comes to new products or sales.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one particular product. How well would you say this description fits you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

accessory products to buy.							
I like to get others' opinions before I buy clothing, shoe and accessory products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel more comfortable buying clothing, shoe and accessory products when I have gotten other people's opinions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When choosing clothing, shoe and accessory products, other people's opinions are not important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

III

Section V: Demographics

DATA Shortname / Alias: **Gender**

ID 175

33. What is your gender?

- ☐ Female ☐ Male

DATA Shortname / Alias: **Age**

ID 176

34. What is your age?

years

DATA Shortname / Alias: **Education**

ID 177

35. What is your highest level of education:

- | | |
|--|--|
| <input type="radio"/> Less than high school | <input type="radio"/> Attended some college |
| <input type="radio"/> High school graduate (includes GED) | <input type="radio"/> Bachelor's degree |
| <input type="radio"/> Associates degree or technical school degree | <input type="radio"/> Graduate degree (MS, MBA, PHD, etc.) |

DATA Shortname / Alias: **Citizenship**

ID 178

36. You are a citizen of

- ☐ United States of America

- ☐ Other (please list)

DATA Shortname / Alias: **Ethnicity**

ID 179

37. What is your ethnicity or ancestral heritage? Please check all that apply.

- | | |
|---|--|
| <input type="checkbox"/> European (White) | <input type="checkbox"/> Pacific Island |
| <input type="checkbox"/> African (Black) | <input type="checkbox"/> Native American |
| <input type="checkbox"/> Hispanic or Latino | <input type="checkbox"/> Other (please describe) |
| <input type="checkbox"/> Asian | <input type="text"/> |

DATA Shortname / Alias: **Quantity Purchased per Month**

ID 180

38. On the average, how many apparel and shoe products do you purchase per half year?

- | | |
|-------------------------------------|---------------------------------------|
| <input type="radio"/> Less than one | <input type="radio"/> 5 to 6 items |
| <input type="radio"/> 1 to 2 items | <input type="radio"/> 7 to 8 items |
| <input type="radio"/> 3 to 4 items | <input type="radio"/> 9 or more items |

DATA Shortname / Alias: **Hours Online**

ID 181

39. How much time do you spend online per day?

- | | |
|--|---------------------------------------|
| <input type="radio"/> Less than one hour | <input type="radio"/> 4 to 5 hours |
| <input type="radio"/> 1 to 2 hours | <input type="radio"/> 5 to 6 hours |
| <input type="radio"/> 2 to 3 hours | <input type="radio"/> 6 or more hours |
| <input type="radio"/> 3 to 4 hours | |

DATA Shortname / Alias: **Internet Experience**

ID 182

40. Indicate your level of Internet experience.

- ☐ Very inexperienced ☐ Inexperienced ☐ Neutral ☐ Experienced
- ☐ Very experienced

DATA Shortname / Alias: **Level of Visiting**

ID 183

41. Indicate your level of visiting the online brand community.

- ☐ rarely ☐ two to four times a week
- ☐ once a month ☐ five to six times a week
- ☐ once every two weeks ☐ once a day or more
- ☐ once a week

DATA Shortname / Alias: **Duration Online**

ID 184

42. Indicate your level of duration for each visit of the online brand community

- ☐ less than 10 minutes ☐ one to two hours
- ☐ 10 to 30 minutes ☐ over two hours
- ☐ 30 to 60 minutes

DATA Shortname / Alias: **Social Network Sites**

ID 185

43. If you use social network websites for social interaction with others, which of the following applications do you use? Please check all that apply

☐ Facebook

☐ LinkedIn

☐ Twitter

☐ You Tube

☐ Blog

☐ Webinars

☐ Myspace

☐ Others

☐ Pinterst

Receiving a code for credits

DATA Shortname / Alias: **EMAIL**

ID 187

Survey Code

If you would like to receive the survey code to receive credit for taking our survey, please click "submit" and complete the survey.

Thank You!

ID 1

The survey code is OBКСRY.

Thank you for your time and participation in this research.

REFERENCES

- Aaker, D. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: Free Press.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17–40.
- Andrews, D. (2002). Audience-specific online community design. *Communications of the ACM* 45(4), 64–68.
- Agafonoff, N. (2006). Adapting ethnographic research methods to ad hoc commercial market research. *Qualitative Marketing Research: An International Journal*, 9(2), 115-125.
- Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of Marketing*, 69(3), 19-34.
- Ahuja, M., Galletta, D., & Carley, K. (2003). Individual centrality and performance in virtual R & D groups: An empirical study. *Management Science*, 49(1), 21-38.
- Andersen, P.H. (2005). Relationship marketing and brand involvement of professionals through web-enhanced brand communities: The case of Coloplast. *Industrial Marketing Management*, 34, 39-51.
- Arnould, E. J. (1998). Ethical concerns in participant observation / Ethnography. *Advances in Consumer Research*, 25, 72-74.
- Arturan, U. (2009). A review of cyber ethnographic research: A research technique to analyze virtual consumer communities, *Boğaziçi Journal*, 23(1-2), 1-18.
- Bagozzi, R. P., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of Interactive Marketing*, 16(2), 2–21.
- Bagozzi, R. P., & Dholakia, U. M. (2006). Open source software user communities: A

- study of participation in Linux user groups. *Management Science*, 52(7), 1099–1115.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist* 37(2), 122–147.
- Bentler, P. M. (1992). *EQS: Structural equations program manual*. Encino, CA: Multivariate Software Inc.
- Bock, G. W., & Kim, Y. G. (2002). Breaking the myths of rewards: An exploratory study of attitudes about knowledge sharing. *Information Resource Management Journal*, 15(2), 14–21.
- Bollen, K. A. (1989) *Structural equations with latent variables*. New York: Wiley.
- Boyd, D. M., & Ellison, N. B. (2008). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), 210–230.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241-58). Westport, CT: Greenwood Press.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: The Guilford Press.
- Brown, J., Broderick, A. J., & Lee, N. (2007). Word of mouth communication within online communities: Conceptualizing the online social network. *Journal of Interactive Marketing*, 21(3), 2-20.
- Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological Methods and Research*, 21(2), 230-258.
- Brown, S., Kozinets, R.V., & Sherry, J.F., Jr. (2003). Teaching old brand new tricks: Retro branding and the revival of brand meaning. *Journal of Marketing* 67, 19–33.
- Buhrmester, M., Kwang, T., & Gosling, S. (2011). Amazon's Mechanical Turk: A new source of

- inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5.
- Burnett, G. (2000). Informational exchange in virtual community: A typology. *Information Research*, 5(4). Available at: <http://informationr.net/ir/5-4/paper82.html>.
- Burt, R. S. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Burt, R. S. (1997). The contingent value of social capital. *Administrative Science Quarterly*, 42(2), 339–65.
- Byrne, B. M. (1998). *Structure equation modeling with Lisrel, Prelis, and Simplis: Basic concepts, applications, and programming*. New Jersey: Lawrence Erlbaum Associates.
- Carlson, B. D., Suter, T. A., & Brown, T. J. (2007). Social versus psychological brand community: The role of psychological sense of brand community. *Journal of Business Research*, 61, 284-291.
- Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's Mturk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, 29, 2156-2160.
- Cha, M., Mislove, A., & Gummadi, K. P. (2009). A measurement-driven analysis of information propagation in the flickr social network. *Proceedings of the 18th International Conference on World Wide Web*, Available at: <http://dl.acm.org/citation.cfm?doid=1526709.1526806>.
- Chai, S., Das, S., & Rao, H. R. (2012). Factors affecting bloggers' knowledge sharing: An investigation across gender. *Journal of Management Information Systems*. 28(3), 309-341.

- Chai, S. & Kim, M. (2010). What makes bloggers share knowledge? An investigation on the role of trust. *International Journal of Information Management*, 30, 408-415.
- Chang, C. M., Yen, C. H., & Cheng, H. L. (2009, November). Trust-building mechanisms and knowledge sharing in virtual communities. *Proceedings of the 9th International Conference on Electronic Business*. Available at:
<http://iceb.nccu.edu.tw/proceedings/2009/1070-1079.pdf>.
- Chen, I. Y. L., Chen, N. S., & Kinshuk (2009). Examining the factors influencing participants' knowledge sharing behavior in virtual learning communities. *Educational Technology & Society*, 12(1), 134-148.
- Cohen, D., & Prusak, L. (2001). *In good company: How social capital makes organizations work*. Boston: Harvard Business School Press.
- Chu, S. C. (2011). Viral advertising in social media: Participation in facebook groups and responses among college-aged users. *Journal of Interactive Advertising*, 12(1), 30-43.
- Chin, W. W. (1998) The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Eds.), *Modern Business Research Methods*, Mahwah, NJ: Erlbaum.
- Chiu, C. M., Hsu, M. H., & Wang, E. T. G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support System*, 42, 1872-1888.
- Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16, 64-73.
- Clark, M. S., & Mills, J. (1993). The difference between communal and exchange relationships: What it is and is not. *Personality and Social Psychology Bulletin*, 19(6), 684-691.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal*

of Sociology, 9, S95-4S121.

Coleman, J. S. (1990). *Foundations of Social Theory*. Cambridge, MA : Harvard University Press.

Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Organization Science* 7(2), 119-135.

Davenport T. H., & Prusak, L. (1998) *Working knowledge*. Boston, MA: Harvard Business School Press.

Dholakia, U. M., Bagozzi, R. P., & Pearo, L. K. (2004). A social influence model of consumer participation in network- and small-group based virtual communities. *International Journal of Research in Marketing* 21(3), 241–263.

Donath, J., & Boyd, D. (2004). Public displays of connection. *BT Technology Journal*, 22(4), 71–82.

Elliott, W. R., & Rosenberg, W. L. (1987). The 1985 Philadelphia newspaper strike: A uses and gratifications study. *Journalism Quarterly*, 64(4), 679-687.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12, 1143-1168.

Erickson, B. H . (1995, February). *Networks, success, and class structure: A total view*. Paper presented at the meeting of Sunbelt Social Networks Conference. Charleston, S.C.

Etzioni, A. (1996). The responsive community: A communitarian perspective. *American Sociological Review*, 61(1), 1–11.

Feick, L. F., & Price, L. L. (1987). The market maven: A diffuser of marketplace information. *The Journal of Marketing*, 51(1), 83-97.

- Fine, G., & Holyfield, L. (1996). Secrecy, trust, and dangerous leisure: Generating group cohesion in voluntary organizations. *Social Psychology Quarterly*, 59(1), 22-38.
- Flap, H. D. (1991). Social capital in the reproduction of inequality. *Comparative Sociology of Family, Health and Education*, 20, 6179-202 .
- Flap, H. D. (1994, July). *No man is an island: The research program of a social capital theory*. Paper presented to the World Congress of Sociology, Bielefeld, Germany.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(February), 39-50.
- Franke, N., & Shah, S. K. (2003). How communities support innovative activities: An exploration of assistance and sharing among end-users. *Research Policy*, 32, 157–178.
- Füller, J., & Von Hippel, E. A. (2008). Costless creation of strong brands by user communities: implications for producer-owned brands. *MIT Sloan Research Paper* No. 4718-08. Available at: <http://ssrn.com/abstract=1275838> or <http://dx.doi.org/10.2139/ssrn.1275838>
- Giesler, M. (2006). Consumer gift systems. *Journal of Consumer Research*, 33(2), 283–290.
- Hampton, K., & Wellman, B. (2003). Neighboring in Netville: How the Internet supports community and social capital in a wired suburb. *City & Community*, 2(4), 277-311.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis* (4th ed.). Englewood Cliffs, NJ: Prentice Hall Inc.
- Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Prentice Hall.
- Haythornthwaite, C. (2005). Social networks and internet connectivity effects. *Information, Communication & Society*, 8(2), 125-147.

- Hagel, J. III, & Armstrong, A. (1997). *Net gain: Expanding markets through virtual communities*. Boston: Harvard Business School Press.
- Harris, L. C., & Goode, M. M. H. (2004). The four levels of loyalty and the pivotal role of trust: A study of online service dynamics. *Journal of Retailing*, 80, 139-158.
- Henri, F., & Pudelko, B. (2003). Understanding and analyzing activity and learning in virtual communities. *Journal of Computer Assisted Learning*, 19, 474-487.
- Ho, L. A., Kuo, T. H., & Lin, B. (2012). How social identification and trust influence organizational online knowledge sharing. *Internet Research*, 22(1), 4-28.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structure Equation Modeling*, 6, 1-55.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204.
- Inkpen, A. C., & Tsang, E. W. K. (2005). Social capital, networks and knowledge transfer. *Academy of Management Review*, 30(1), 146–165.
- Jang, H., Olfman, L., Ko, I., Koh, J., & Kim, K. (2008). The influence of on-line brand community characteristics on community commitment and brand loyalty. *International Journal of Electronic Commerce*, 12(3), 57-83.
- Katz, E. Blumer, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19-32). Beverly Hills: Sage.
- Kavanaugh, A., Carroll, J. M., Rosson, M. B., Zin, T. T., & Reese, D. D. (2005). Community

- networks: Where offline communities meet online. *Journal of Computer-Mediated Communication*, 10(4). Retrieved from <http://jcmc.indiana.edu/vol10/issue4/kavanaugh.html>
- Keller, K.L. (2003). *Strategic brand management: Building, measuring, and managing brand equity*. Upper Saddle River, NJ: Prentice Hall.
- Kim, J. W., Choi, J., Qualls, W., & Han, K. (2008). It takes a marketplace community to raise brand commitment: The role of online communities. *Journal of Marketing Management*, 24(3-4), 409-431.
- Kline, R.B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford.
- Ko, H., Cho, C. H., & Robert, M. S. (2005). Internet uses and gratifications, A structural equation model of interactive advertising. *Journal of Advertising*, 34(2), 57-70.
- Kolekofski, K. E., & Heminger, A. R. (2003). Beliefs and attitudes affecting intentions to share information in an organizational setting. *Information & Management* 40(6), 521–532.
- Korgaonkar, P. K., & Wolin, L. D. (1999). A multivariate analysis of web usage. *Journal of Advertising Research*, 39(2), 53-68.
- Kozinets, R. V. (1998). The field behind the screen: Using netnography for marketing research in online communities. *Journal of Marketing Research*, 39(1), 61-72.
- Kozinets, R. B. (1999). “I want to believe:” A netnography of the X-philes’ subculture of consumption. *Advances in Consumer Research*, 24, 470-475.
- Kozinets, R.V. (2002). The field behind the screen: Using netnography for marketing research in online communities. *Journal of Marketing Research*, 39, 61-72.
- Leimeister, J.M., Sidiras, P., & Krcmar, H. (2006). Exploring success factors of virtual

- communities: The perspectives of members and operators. *Journal of Organizational Computing and Electronic Commerce*, 16, 277–298.
- Lenhart, A., & Madden, M. (2007). Social networking websites and teens: An overview. In *The Pew Internet & American Life Project*. Retrieved from http://www.pewinternet.org/~media/Files/Reports/2007/PIP_SNS_Data_Memo
- Lin, N. (1982). Social resources and instrumental action. In P. V. Marsden & N. Lin (Eds.), *Social structure and network analysis* (pp. 131-45). Beverly Hills, CA: Sage.
- Lin, N. (1999). Building a network theory of social capital. *Connections*, 22(1), 28-51.
- Lin, H. F. (2006). Understanding behavioral intention to participate in virtual communities. *Cyber Psychology and Behavior*, 9, 540-547.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130-149.
- Maclaran, P., & Catterall, M. (2002). Researching the social web: Marketing information from virtual communities. *Marketing Intelligence & Planning*, 20(6), 319-326.
- McWilliam, G. (2000). Building stronger brands through online communities. *Sloan Management Review*, 41(3), 43–54.
- Maslow, A. H. (1970). *Motivation and personality*. New York: Harper.
- Mathwick, C., Wiertz, C., & Ruyter, K. (2008). Social capital production in a virtual P3 community. *Journal of Consumer Research*, 34, 832-849.
- Marx, K. (1933). *Wage-labour and capital*. New York: International Publishers Co.
- McAlexander, J. H., Schouten, J. W., & Koenig, H. F. (2002). Building brand community. *Journal of Marketing*, 38-54.

- McAlexander, J.H., Shouten, J.W., & Koenig, H. (2002). Building brand community. *Journal of Marketing*, 66(1), 38–54.
- McQuail, D. (1987). *Communication*. New York: Longman Press.
- McQuail, D., Blumler, J. G., & Brown, J. R. (1972). The television audience: A revised perspective. In D. McQuail (Ed.), *Sociology of mass communications* (pp. 438-454). Harmondsworth: Penguin.
- Mendelsohn, H. (1964). Listening to the radio. In L. A. Dexter & D. M. White (Eds.), *People, Society, and Mass Communication* (pp. 239-249). New York: The Free Press of Glencoe.
- Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29, 314–328.
- Morgan, R. D., & Hunt, S. D. (1994) The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58, 3, 20–38.
- Muniz, A.M. Jr., & O’Guinn, T.C. (2001). Brand community. *Journal of Consumer Research*, 27(4), 412-31.
- Muniz Jr., A. M., & Schau, H. J. (2005). Religiosity in the abandoned apple Newton brand community. *Journal of Consumer Research*, 31(4), 737–747.
- Muthén, L. K., & Muthén, B.O. (2000). *Mplus user’s guide*. Los Angeles, CA: Muthen & Muthen
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Thousand Oaks, CA.: Sage Publications.

- Nohria, N., & Eccles, R. G. (1992). Face to face making network organizations work. In N. Nohria & R. G. Eccles (Eds.), *Networks and organizations: Structure, form and action* (pp. 288-308). Boston: Harvard Business School Press.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Oliver, R. L. (1997). *Satisfaction a behavioral perspective on the consumer*. New York: McGraw-Hill.
- Oliver, R. L. (1999). Whence customer loyalty? *Journal of Marketing*, 63, Special Issue, 33–45.
- Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *Journal of Applied Behavioral Science*, 36(1), 23-42.
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *Cyber Psychology & Behavior*, 12(6), 729-733.
- Paxton, P. (1999). Is social capital declining in the United States? A multiple indicator assessment. *American Journal of Sociology*, 105, 88–127.
- Podsakoff, P. M., Ahearne, M., & MacKenzie, C. B (1997). Organizational citizenship behavior and the quantity and quality of work group preferences. *Journal of Applied Psychology*, 82(2), 262–70.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 22, 1-24.
- Porter, C. E. (2004). A typology of virtual communities: A multi-disciplinary

- foundation for future research. *Journal of Computer Mediated Communication*, 10, 1
Available at: <http://jcmc.indiana.edu/vol10/issue1/porter.html>.
- Putnam, R. D. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton, NJ: Princeton University Press.
- Putnam, R. D. (1995). Bowling alone, revisited. *The Responsive Community*, 18-33.
- Raacke, J., & Bonds-Raacke, J. (2008). Myspace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyber Psychology & Behavior*, 11(2), 169-174.
- Rayburn, J. D. (1996). Uses and gratifications. In M. B. Salwen & D. W. Stacks (Eds.), *An integrated approach to communication theory and research* (pp.145-163). Mahwah, NJ: Lawrence Erlbaum Associates.
- Ridings, C. M., & Gefen, D. (2004). Virtual community attraction: Why people hang out online. *Journal of Computer Mediated Communication*. Retrieved from http://jcmc.indiana.edu/vol10/issue1/ridings_gefen.html
- Riding, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. *Journal of Strategic Information Systems*, 11, 271-295.
- Rubin, A. M. (1981). An examination of television viewing motivations. *Communication Research*, 8, 141-165.
- Rubin, A. M. (1994). Media uses and effects: A uses and gratifications perspective. In J. Bryant (Ed.), *Media effects: Advances in theory and research* (pp. 417-436). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication and Society*, 3(1), 3-37.

- Ryu, S., Ho, S. H., & Han, I. (2003). Knowledge sharing behavior of physicians in hospitals. *Expert Systems with Applications*, 25(1), 113–122.
- Sherry, J., Lucas, K., Rechtsteiner, S., Brooks, C., & Wilson, B. (2001). *Video game uses and gratifications as predictors of use and game preference*. Paper presented at the annual conference of the International Communication Association. San Diego, CA.
- Shumaker, S., & Brownell, A. (1984). Toward a theory of social support: Closing conceptual gaps. *Journal of Social Issues* 40(4), 11-36.
- Spiggle, S. (1994). Analysis and interpretation of qualitative data in consumer research. *Journal of Consumer Research*, 21(December), 491-503.
- Staw, B. M. (1990). An evolutionary approach to creativity and innovation. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work* (pp. 287-308). London: John Wiley & Sons.
- Sukoco, W. Y., & Wu, B. M. (2010). The personal and social motivation of customer participation in brand community. *African Journal of Business Management*, 4(5), 614-622.
- Sung, S., Kim, Y., Kwon, O., & Moon, J. (2010). An explorative study of Korean consumer participation in virtual brand communities in social network websites. *Journal of Global Marketing*, 23, 430-445.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41, 464-478.
- U.S. Census Bureau. (2014). *Census Bureau Releases 2010 Census Demographic Profiles for the United States, Arkansas, Illinois, Indiana, Iowa, Louisiana, Maryland, New Jersey, Oklahoma, Oregon, South Dakota, Texas, Vermont and Virginia*. Available at: http://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn144.html

- Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 29(1), 35-57.
- Wellman, B., & Gulia, M. (1999). Net-surfers don't ride alone: Virtual communities as communities. In B. Wellman (Ed.), *Networks in the global village* (pp. 331-366). Boulder, CO: Westview.
- Wellman, B., Haase, A. Q., Witte, J., & Hampton, K. (2001). Does the Internet increase, decrease, or supplement social capital? Social networks, participation and community commitment. *American Behavioral Scientist*, 45, 436-455.
- West, R. L., & Turner, L. (2010). *Introducing communication theory: Analysis and application*. McGraw-Hill, Inc. New York, NY.
- Wiener, Y. (1982). Commitment in organizations: Normative view. *Academy of Management Review*, 7, 418-428.
- Williams, D. (2006). On and off the 'net: Scales for social capital in an online era. *Journal of Computer-Mediated Communication*, 11, 593-628.
- Wu, Y. W., & Sukoco, B. M. (2010). Why should I share? Examining consumers' motives and trust on knowledge sharing. *Journal of Computer Information Systems*, 11-19.